2004 Annual Report Brule River State Forest

Vision Statement from 2002 Masterplan

The Brule River State Forest provides for the sustainability of a unique river system and biologically rich forest community. The Forest's natural resources are managed, protected and restored to promote ecological health and natural communities, to complement the larger ecosystem, and to recognize cultural and economic values. The state forest accommodates recreational activities consistent with the natural quality and scenic settings found along the Bois Brule River. The Department of Natural Resources works with federal, state, tribal and local governments, neighboring industrial and private forest owners, and citizens who enjoy and subsist on the resources of the Brule River State Forest.

Reflection on 2004

2004 was the kind of year a forest superintendent hopes for. There were a number of special events to celebrate the centennial of professional forest management in Wisconsin. The weather was pleasant and people were happy to be using the state forest. There were no major natural disasters. Property programs settled into a reasonable pace. It was a very good year. The following reports will share the accomplishments of 2004 and the plans for 2005 and beyond.

Probably the most memorable event of the year was providing the holiday tree for the state capital. The tree was selected from the Brule River State Forest to celebrate the centennial of professional forest management in Wisconsin. Forester Dave Schulz presented the tree to Wisconsin's First Lady Jessica Doyle, and all the people of Wisconsin, in a ceremony in the capital rotunda on December 3.

In the early spring of 2004 another native species was returned to the Brule area when wild turkeys were released just south of the state forest boundary. Ranger Kevin Feind, as president of the local chapter of the National Wild Turkey Federation played a critical role in raising funds and encouraging the DNR to release the birds. All indications are that the birds are doing well and can now be found within the state forest.

The state forest was able to acquire nearly 100 acres of land in 2004. This acquisition will help the property manage larger blocks of the forest according to masterplan goals and provide land for public use. The DNR buys land from willing sellers at a price determined by a third party appraiser to be a fair market value. After the purchase the DNR continues to make payments in lieu of taxes at the same rate as if the property were in private ownership.

The property concluded a variance to the masterplan in order to salvage dead oaks and encourage a new oak forest to regenerate.

The following reports will share the accomplishments of 2004 and the plans for 2005 and beyond. Comments on property operations are always welcomed at the state forest headquarters.

Staffing

Most of the staff returned from 2003 and one new person, Christine Sazama was brought on as an intern from Northland College. Naturalist Josh McIntyre left in October to return home to take care of his ailing mother. Josh brought a unique character to the position and will be sincerely missed. Chris Sutherland returned for the summer from UW-Stevens Point where he is studying forestry. Veteran Rangers Jerry Danielson and Ed Culhane patrolled the forest and cared for the campers. Cathy Khalar continues as our receptionist and Kurt Janko performs maintenance and assists Forester Dave Schulz.

L-R: John Bronson, Cathy Khalar, Frank Maragi, Dave Schulz, Ed Culhane, Kevin Feind, Kurt Janko, Chris Sutherland, Steve Petersen

Wildlife Management Activities

Greg Kessler, Wildlife biologist

Habitat Work

Dike maintenance was completed at Cloverland Community Center, Loveland Road, Koski and Fasteland ponds. Maintenance consisted of cutting brush and trees from all the embankments and filling muskrat burrows on 6 dikes. Muskrat damage is repaired by compacting the tunneled area with a power rammer, back-filling with topsoil, and reseeding the site.

An ASV (all-season-vehicle) was used again to aid in mowing of hunter walking trails, wildlife openings, and grasslands. The ASV allows mowing during wetter weather conditions and rougher terrain than is acceptable with a tractor mounted brush mower. This has improved our ability to not only maintain the open habitat types, but will also minimize the need to use herbicide or hand-cutting. A total of 16 acres in 8 openings were mowed along with 2 miles of trails.

An experimental burn was conducted on a couple small wildlife openings to test the feasibility of burning rather than hand-cutting or herbicide treatment for areas not suitable for mowing. Initial efforts were labor intensive relative to the alternatives, but we will continue to test this practice for it's potential usefulness.

One 59-acre prescribed burn was conducted at the Clevedon waterfowl refuge on April 6th with a cooperate effort of forestry-fire control staff, BRSF personnel, and wildlife management.

Surveys

Furbearers tracking surveys along Clevedon road indicate lower numbers of fisher, but still in good abundance while bobcats are increasing. Coyote and fox abundance appears to fluctuate relative to each other and to incidence of diseases such as mange and distemper.

Tracking surveys in 2005 have found evidence of 4 wolves in the Shoberg Lake pack and 3-5 in the Casey Creek pack. There was evidence of 3 wolves remaining in the Moreland lake pack as well as 4 in the Orienta pack which spends a small amount of time on the state forest near Brackets corner. In addition, other tracks and reports indicate additional wolves may be present north of Hwy 13 west of the Brule River.

Shorebird survey was once again conducted and continues to find the same relative types and abundance of birds each year. Primary birds observed are: red-winged-black birds, common snipe, American bitterns, great blue herons, green herons, pied-billed grebe, sora rails, yellow-headed black

birds, bald eagles, and waterfowl. Waterfowl observed include Canada geese, mallards, wood ducks, hooded mergansers, ring-neck duck, blue-winged teal, and one ruddy duck.

Sharptail grouse dancing ground, called a lek, was located once again west of Clevedon road on the goose refuge. Five males were displaying in 2004, up from only 3 the year before. While no other leks were located, sharptails can be seen on Motts Ravine State Natural Area as well as the hail damage area near Stone Chimney and Turkey farm roads. Sharptails in the hail damage area responded very well to the temporary open grass-brush that is typical of natural disturbance in the pine barrens-savanna habitats. Fall sightings in the hail damage area indicate there were several successful broods raised here last year.

Aerial surveys are used twice annually to determine the number of territories occupied by eagles and ospreys in late April and the number of young immediately prior to fledging in late June. In 2004 there were 7 occupied eagle territories that fledged 9 young, while there was only 1 osprey nest that failed to fledge their young.

Planned Activities for 2005

Survey work will continue to include monitoring wolves, sharp-tailed grouse, marsh birds, anurans, eagle-osprey, and furbearers.

Habitat work will include two prescribed burns, mowing of four fields, and maintaining dikes. Prescribed burns include a 55-acre burn at the Barrier Ponds and a 15-acre burn at the mitigation site on the Brule River Road. Mowing will be conducted at Fasteland (15ac), Koski (10ac), Duckponds (15-20 acres), and goose refuge (40-50ac). Dike maintenance will be done at Koski, Goose Refuge, and the Barrier ponds, as time and funds permits. Maintenance is required to prevent the dikes from being breached which would lead to washouts.

Brule River Hatchery Report

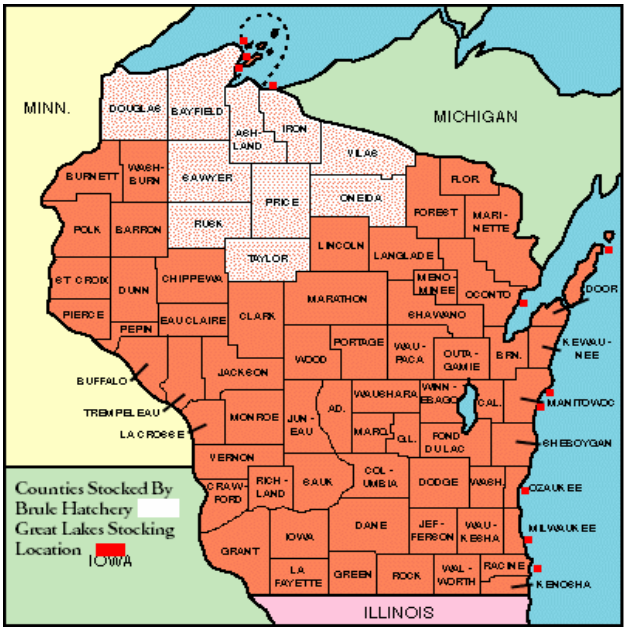
Gervase M. Thompson – Hatchery Technician

The Brule River Trout Rearing Station was built in 1927. The water supply for the rearing station is the entire flow of the Little Brule River. We receive 2400 gpm of water flow throughout the facility. We raise three domestic and two feral species of trout at Brule. St. Croix brook and brown trout, Erwin rainbow trout, Seeforellen brown trout and Timber Coulee brown trout. All domestic fish are transferred in as small fingerlings in early June from the St. Croix Falls and Osceola State Fish Hatcheries. The Seeforellen brown trout arrive in early July from the Bayfield State Fish Hatchery and the Timber Coulee brown trout will be transferred in July. We stock lakes, rivers and streams in 11 counties in northern Wisconsin and also parts of Lake Superior and Lake Michigan (Figure 1). In 2004-2005, we will stock approximately 28,000 Brook trout, 197,000 Brown trout, 54,000 Seeforellen brown trout, 4,000 Timber Coulee brown trout and 20,000 Rainbow trout.

On June 7, 2004, the Brule Fish Hatchery and Brule River State Forest held the second annual Family Fun Day. (Figure 2) Activities included hatchery tours, fly tying, fly casting, fish printing, electrofishing demonstration, and canoe trips on the Brule River. It was a big success with about 180 people in attendance. They were assisted by members of the Brule River Sportsman's Club, Trout Unlimited, 4-H, and Fisheries Management.

A pond renovation project was completed in June, 2004. A Wisconsin DNR operations crew from Black River Falls brought up heavy equipment to riprap our lower four ponds. These ponds were built in the 1970's, and the walls of the ponds were starting to deteriorate. Trap rock from a local gravel pit was used to riprap the walls of the four ponds. (Figure 3) This pond project will ensure the use of these rearing ponds for years to come.

Over the last several years the nature center in the old hatchery office was a big hit with tourists. We had 2168 visitors from 21 states and three countries sign our guest book from July 2003 to June 2004. Many tourists visit our facility after hours during the summer. These visitors are not signed in the guest book and therefore are not counted.



BRSF Forest Management

Dave Schulz – Forester

Spring means tree planting season, and this year the follow-up planting from the hail damage sales continued with the planting of 200 acres of previously harvested areas along with the replanting of areas that were planted in 2002 that had poor survival. Overall, about 300,000 trees were planted by our contracted planting crew.

2 red pine thinnings were operated this spring, one on the "Enstrom" property off of Rifle Range road and the other between Logger and Sand roads east of Hwy 27.

One prescribed burn was completed on the "goose ponds" along Clevedon road. The purpose of these grass burns are to maintain the area in grasses by setting back the woody vegetation with fire. The only wildfire reported on the state forest during 2004 was reported during winter and was the result of a hunter's campfire burning the peat and organic soil in a remote area along Lake Superior. The fire smoldered through a good part of the winter, with the spring melting of the snow eventually extinguishing the fire.

Summer brings bugs, and many bugs are out there that eat trees. Jack pine budworm populations began building on the state forest, and time was spent assessing the amount of damage in our jack pine. Moderate defoliation was seen in many areas of the forest, and several years of defoliation on the older age class of jack pine can cause significant mortality.

Another insect that was monitored for was the Emerald Ash Borer. This is a non-native insect that is typically brought into an area by transporting firewood from an infected area. Sampling was done near both of our campgrounds and fortunately, no signs of the insect were found. This is however, an insect that needs to be closely monitored.

Fortunately, populations of two lined chestnut borers have seemed to collapse, thereby causing little significant new mortality of the red oak stands in our area.

One red pine stand was thinned this summer and field work for the timber sales offered for sale on our fall bid opening was completed.

A timber sale bid opening was held on September 22 for seven tracts of timber totaling 611 acres. 9,160 cords of wood brought in a total price of $433,965. Jack pine stumpage markets continued to be strong, with prices in the $60 per cord range.

Several sales were operated during the fall months, including one of the oak salvage sales that were sold in the fall bid opening. 3 pine sales were also operated during the fall months. Overall, 5,800 cords of wood were cut on the state forest during 2004, bringing in $252,000 during the calendar year.

In October, the state forest was visited by auditors from the Forest Stewardship Council and Sustainable Forestry Initiatives organizations. They looked at all aspects of forest management on the Brule Forest and found that we complied with all criteria of forest certification. This was a part of a broader third-party audit of the entire Wisconsin State Forest program.

Plans were made for tree planting in the spring of 2005 by completing survival counts of previous years plantings. Survival was poor during 2003 season and replanting will be done in 2005. Fortunately, the trees planted in the spring of 2004 appear to be doing very well. A 24 acre area north of Troy Pit road was prepped for planting by furrowing with fire plows. Much of this area was burned during a wildfire in 1997 and will be planted to jack pine next spring.

Updating forest reconnaissance has been the main work activity over the winter and much progress has been made. Frank Maragi was hired to assist with the field work and he, along with Chris Sutherland during his college break, have updated many acres of clay plain forest over the winter. Plans for future timber sales and other management activities were made which are outlined in other portions of this annual report.

The oak salvage sale located at the Bayfield hiking trail was harvested this winter. Over 1200 cords of wood was harvested. Plans are to plant oak seedlings in the spring of 2005 on approximately 15 acres of this area to supplement oak regeneration.

North Country Trail

In 2004 the Brule St Croix chapter of the North Country Trail Association completed the parking lot on Samples Rd including the construction of a kiosk. A parking lot and kiosk were also completed at the US 53 Trailhead. A simple bridge was constructed over the Jersett Creek crossing to help protect stream banks.

The chapter is looking forward to putting the finishing touches on the trail east of BRSF this summer, permitting hikers to hike uninterrupted from the Chequamegon National Forest to Lake St. Croix. They had originally planned to begin the major project of a boardwalk (or "puncheon") across the southern Brule Bog, but that is on hold for now as they confer with DNR Natural Areas and Water Regulations and Zoning people on the crossing permit. Meanwhile, they will be working west of Solon Springs designing and building trail through the Bird Sanctuary.

Fisheries Management Activities

Dennis Pratt, Fish Biologist

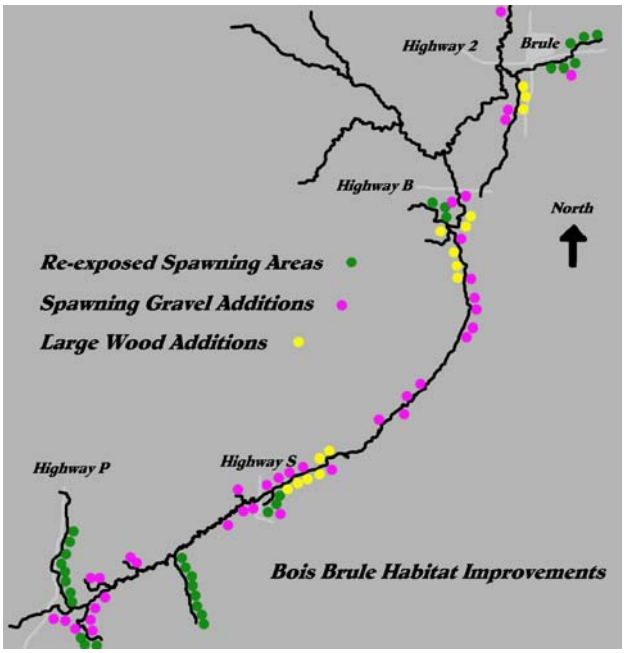
In 2004, fisheries staff were again able to work on a cooperative trout habitat project with the Brule River Sportsmen's Club. On Saturday, July 3rd between forty and fifty volunteers placed thirty yards of spawning gravel in the Gitche Gumee Club stretch of the river (See photo below). Special thanks go to the Haskell Noyes family at Noyes Camp lodge who were gracious hosts for the activity. The gravel was donated by Iron River Sand and Gravel and the Winneboujou Club donated the use of a tractor/loader. Gravel was then hauled down a foot path in wheel barrows and placed in gravel boats for club members to float upstream to the spawning site. Good numbers of brown trout were observed utilizing the new gravel. Fisheries staff also completed habitat improvement work on a Bois Brule tributary feeder, Sandy Run and began work on Cutler creek during the 2004 field season.

Gravel being placed at Noyes Camp project – July 2004

Fisheries staff monitored both the spring and fall trout and salmon runs at the Sea Lamprey Barrier and partnered with United States Fish and Wildlife Service personnel to capture and remove lampreys at the barrier. Trout and salmon spawning activity at habitat improvement sites were monitored and maintenance work was done at a number of the past habitat improvement sites.

Fisheries staff will continue salmonid monitoring and habitat improvement work in 2005 (See habitat improvement map below). We are presently working with the town of Brule to find funding to reset the Cutler creek culvert on Castle road so that brook trout will once again be able to reach spawning areas upstream of the road crossing.

The Brule is scheduled for a TFM (lamprey) treatment this summer. All treatment work is done by the US Fish and Wildlife Service from Marquette Michigan. This is done about every three or four years. They treat from the lamprey barrier downstream to the lake.



Habitat Improvement Location Map

Wisconsin's State Forests

During the early and middle 20th century the State Forests were created from a combination of private donations and public funding to maintain watersheds and unique ecosystems in Wisconsin, and manage forests for long-term sustainable use. Currently, Wisconsin State Forests encompass over 490,000 acres of publicly owned forests. These forests are governed by Wisconsin Statute 28.04, which states that "The Department shall assure the practice of sustainable forestry and use it to assume that state forests can provide a full range of benefits for present and future generations." Within this statute 'sustainable forestry' is defined as the practice of managing dynamic forest ecosystems to provide ecological, economic, social, and cultural benefits for present and future generations.

In accordance with statute 28.04 the forests are managed for a combination of recreational opportunities, timber management and harvests, aesthetics, watershed protection, and as habitat for a variety of plant and animal species (some rare and endangered). The ultimate goal of this management is to benefit the people of Wisconsin, both those here today and those who will follow us. Department of Natural Resources managers use the principles of sustainable forestry to assure that the state forests can now and will continue to provide a full range of benefits. The benefits of the state forests are many and include soil protection, public hunting, protection of water quality, production of recurring forest products, outdoor recreation, native biological diversity, aquatic and terrestrial wildlife, and aesthetics.

Brule River State Forest Hail Damage Monitoring Project 2004 Summary

Colleen Matula, NOR Forest Ecologist/Silviculturist

Background:

Four years after the catastrophic hail damage on the Brule River State Forest and ecological changes are still occurring. To capture a glimpse of what is changing, monitoring efforts were established in the spring of 2002. After two years of inventory on the plots we have looked at the effects on tree growth internally and externally, documented tree regeneration trends and observed an interesting change in bird species on some of the affected sites.

Tree Health and Growth Measurements

The effect of crown loss on radial growth was determined from increment cores taken from selected trees at each plot. To allow for natural year-to year variation in growth, the mean annual ring width for the 4 years after the 2000 storm was compared to the mean annual ring width for the 10 years before the storm, 1990 - 2000. Radial growth was also compared to the crown dieback assessments for each tree.

Summary

The following summarize the data gathered from both control and affected plots in 2003. The average prestorm growth rate (years to increase 1 inch in diameter) was derived from the mean ring width for the ten years before the storm. The percent reduction of stem radial growth is based on a comparison of stem growth of the post-storm rings.

<u>By species:</u>

- For red pine the radial growth reduction was 20 - 50% on trees that were affected by the hail.
- For aspen the radial growth reduction was 25% on trees that were affected by the hail.
- For swamp conifer it varied by species.
    - Northern white cedar had a radial growth reduction of at least 50%.
    - Balsam fir and black spruce had less than 20% growth reduction. Most of the trees that were assessed had crown dieback of 20% or less.
    - The swamp conifer that had more than 20% crown dieback usually perished, since these species can not tolerate a large percentage of defoliation.

So what does this all mean? As mentioned last year, the red pine stands are recovering from moderate to minimal affects from the storm. There is a reduced growth rate in this species but should level off once the apical portion fills in with lateral branches taking over. Because of the reduced growth rate for several years, these trees will be slightly smaller in diameter and height as compared to the control stands.

The aspen appears to be recovering. The older stands have some signs of reduced growth rate. Of particular interest would be to document signs of secondary infection such as Phellinus and other diseases. The younger stands are showing growth on the advanced regeneration. This should be monitored for future quality.

As mentioned last year, the swamp conifers were significantly affected. With little tree regeneration in the stands, perhaps some stand will convert to alder pockets where affected.

Future

The tree health and growth measurements for this study are finished and results will be written in a final report. Long-term effects from the hail damage will be documented over time. Significant aspen regeneration sprouted in response to the damage. Following the growth and quality of these stands will be important.

Breeding Bird Count

The breeding bird transects were conducted again in June of 2004. Some of the more common species were documented. Of particular interest, however, is the response by grassland bird species to the open, salvaged areas off Turkey Farm road. Sharp-tailed grouse were noted as well as the grasshopper, vesper, and savannah sparrows. The grasshopper sparrow, of all species, is uncommon in the northern region. These particular species need vast areas of open, barren habitat with occasional short shrubs. Future bird surveys are planned especially focusing in this area.

Log sled placed near office with six logs representing the six northern state forests.

Hilsenhoff Biotic Index

The Hilsenhoff Biotic Index uses samples of aquatic arthropods to evaluate the degree of organic pollution in a stream. This study was most recently performed on the Brule in 2002 and it will be repeated in 2005 either by DNR staff or UW-Superior Faculty.

Development and Maintenance

Several notable development projects were completed in 2004 and some major maintenance was also accomplished.

In spring of 2004 property staff constructed a new landing for the highway 2 canoe landing. The cribbing was built near the shop, hauled to the parking lot for the landing, and carried to the river with a backhoe operated by Olson Brothers Contractors, of Brule. Once the wooden structure was in place and filled with ballast it was decked and a boardwalk was built up the hill. The goals of this project were to protect the river and shoreline from erosion caused by people entering the river and dragging canoes up the bank. The landing functioned well over the summer and many compliments were received. Bill Blust, Fisheries Technician, also helped for a day on this project.

Over the summer Chris Sutherland and Kurt Janko worked to stain or paint all the structures on the property, including the restrooms, signs, posts, and picnic tables. This was a big project and made a noticeable difference.

A project carried over from 2003 was to restore the shoreline in the Bois Brule Picnic Area. In 2004 sections of the shoreline were rip-rapped and the canoe landing beach was also covered with washed rock, like is used for creating spawning habitat on the upper river.

Large rocks that were used to delineate campsites in the Bois Brule campground were removed to restore a more natural appearance. Though the campsites look more natural the rangers spent more time helping campers understand the limits of the campsites.

Work continued to flatten the ski trail and remove stumps adjacent to the trail. Except for a few minor issues the ski trail is now in excellent condition. The classic only trail was stumped and graded and received favorable comments this season.

State forest staff, ski club volunteers, and other DNR staff all contributed effort to build a storage garage for the ski trail. The 30 by 40 foot garage with 12 foot sidewalls and three overhead doors was enclosed just in time for snowfall. The project was funded 50% by the ski club. This garage is used to store the snowmobiles and grooming equipment as well as all the supplies that are used on the ski trail. The garage is built so that the Tucker can be driven straight through without needing to disconnect the groomer from it. However, during this season the Tucker spent most of its time broken down along the trail…

When the garage was completed it freed up space in the ski hut for remodeling. Though the work was actually done in 2005 it turned out so nice it deserves mentioning. The building was gutted to the studs and rafters, insulated, and paneled with knotty pine. Several nice windows were installed and improved lighting was also provided. Skiers are very appreciative of the facility. Kayla Manz sewed valances for the windows and a curtain for a changing area.

The area north of Minnesuing Field was cleared of vegetation to accommodate aircraft landings. The brush was burned over winter and in the future the vegetation will be maintained by periodic burning.

A section of snowmobile trail was built to move the trail off private land near St. Croix Lake. The trail now runs to Rifle Range Road, then south to connect with the old route. The snowmobile trail overlook described in the masterplan may be constructed in 2005.

New property boundary signs were placed along highway 2. Installation was delayed as the Department of Transportation forbids their installation on DOT right of way and locations needed to be selected on state forest property.

Permits have been granted to construct the boardwalk to the Stone Chimney Road landing and funding has also been secured. This project will be done in the spring of 2005.

This ceremonial log stamp was created to celebrate the centennial of professional forest management in Wisconsin. It replicates a stamp used by the Weyerhaeuser and Denkmann Company. Frederick Weyerhaeuser made the initial donation to the state that became the Brule River State Forest.

Real Estate

4 parcels were purchased for the Brule River State Forest in 2004.

- 18 acres from Korhonen sec.10 49-10
- 40 acres from Mikkola sec.22 48-10
- 29 acres from Kelleher sec.28 46-11
- 10 acres from Jarvi sec. 23 48-10

Land acquisition is only done from willing sellers. When a party shows an interest in selling their land an appraisal from a third party is arranged. This appraisal considers the sale prices of comparable property and other factors to arrive at a fair market value and this amount becomes the state's offer.

When the state forest buys land it continues to make payments to the local taxing authorities at the same rate as if it were privately owned. This amount does not change if buildings are removed and the value of the property, which determines the payment amount, will follow the valuation of the township.

Funding to purchase lands is from the Stewardship Account, a state bonding program established to acquire land for conservation and recreation. A large part of the payment of Stewardship bonds is made from the Forestry Account.

The state forest has entered into a 30 year lease of lands from the Winneboujou Club to continue to operate the Winneboujou Landing. This lease updates and renews the prior lease which was first established in 1981.

FIREWISE GRASS ROOTS OUTREACH PROJECT

In 2004, Wisconsin DNR Division of Forestry was awarded a $25,000 grant for the implementation of a Grass Roots Outreach Project. Only three states in the nation were awarded this opportunity; the other states are New Mexico and Alabama. The purpose of the project is to test methods for motivating behavioral change among residents and communities to reduce their vulnerability to wildland fire by identifying and empowering individuals and groups to *communicate with each other* about mitigation efforts and available resources.

The project is driven by an individual contracted by the state to serve as a Firewise Community Organizer (CO). The intention is for this person to be a resident of the area who has taken proactive measures to mitigate their own property and is able to communicate with other residents on a peer-to-peer level. Wisconsin has been fortunate to be able to contract with long-time resident Mary Reichert as the CO in the Brule River Valley.

Brule River's residents are largely seasonal, many living in summer cabins in the wildland-urban interface. The last major fire in the area was just south of the Brule Valley, in the late 1980's. However, in the fall of 2003, there was a small power line fire on some private property within the State Forest. It was enough to get the people in area concerned and thinking about fire, and many residents of Brule River have since shown interest in what they can do to mitigate the effects of wildfire on their homes and property.

To aid in communication, Mary created a binder containing fire awareness tips and distributed it to 45 of the fifty families in the area. Throughout the summer, Mary made contact with individual residents in the area and completed fire-prone property assessments based on the topics of Firewise landscaping, emergency vehicle access, and fire-resistant building materials. She made specific recommendations regarding ladder fuels, thinning out overgrown vegetation, and trimming up trees.

As a result of the outreach, she began to see changes made towards better access, removal of trees and ignitable debris around structures, and updating of fire extinguishers and expects people will continue to make changes in the spring and summer when they return.

Many area residents were enthusiastic about the Grass Roots project. At one cabin, the whole family walked with Mary to learn about Firewise principles. The next day, the kids were put to work cutting trees around the buildings, trimming up the firs, and raking back needles from the buildings. A couple of other residents wanted a written report from Mary to have available to other family members who shared in the use of the cabins.

For cabin owners in the area who were resistant to change, Mary talked to them about the small things that can make a difference, such as raking away pine needles from the sides of buildings, which helped them find a balance between change and taking steps to being Firewise.

Brule Dispatch Group Fire Season

The Brule Ranger Station is used to dispatch DNR fire suppression activities across the four county area of Douglas, Bayfield, Ashland, and Iron counties. The DNR is responsible for all wildland fire suppression activities across that area. The 2004 fire season overall was below average for both numbers of fires as well as acreage burned. In 2004, 96 wildland fires burned a total of 65 acres within the Brule Dispatch group. This compares to long term averages of 105 fires burning over 334 acres.

Since much fire activity is directly related to the weather conditions, The Brule fire dispatcher has kept very accurate weather records over the last 70 years. Here are some interesting facts and figures on this last year of weather observations.

- High Temp : 92 degrees on June 8
- Low Temp: -39 degrees on January 17
- Peak Snow Depth:28 inches
- Total Snowfall: 85.5 inches (Oct.- March)
- Average Snowfall:68 inches (Oct. – May)

Wild Turkey Reintroduction near BRSF

Sitting in a pop-up blind on the Barnes' fuel breaks on a chilly April morning, a DNR wildlife biologist is observing six male sharp-tailed grouse strutting their stuff on a dancing ground to attract females for mating. As if watching this ritual only a few feet from the obsessed suitors isn't exciting enough, a hen turkey begins to yelp from somewhere within the grassland patch that is host to the sharp-tails this morning. Why is hearing a yelping hen so exciting? Until very recently few people would expect to hear a turkey in Bayfield County.

In March of 2004, the Department translocated 164 wild turkeys from Langlade, Lincoln and Marathon Counties to Bayfield and Douglas Counties. With the help of many members from the Snowbelt Longbeard and Gitchee Gumme chapters of the National Wild Turkey Federation (NWTF), six landowners, a couple of school groups, several media and numerous others, the birds were divided by sex and maturity for release at one of six sites spread out amongst the best habitat in the two counties.

From capture to release, the translocation project flowed like clockwork. DNR wildlife staff used cannon and rocket nets to capture the birds in just 8 days. Volunteers from local NWTF chapters were on hand to transport the turkeys almost immediately after capture. Due to the efficiency of the entire operation, all birds were released within a day after capture.

Weather conditions during release and for a few weeks after release were blustery, with several accumulating snowfalls and many cold evenings. This initially concerned biologists, as translocation can be very stressful to turkeys, and winter mortality in translocated populations is well documented. However, this project was purposefully delayed until late winter to minimize winter mortality and from turkey sightings received and wildlife staff observations, that planning appeared to pay off.

Through the spring and summer of 2004, 24 broods were observed and reported in Bayfield and Douglas Counties. The Douglas County broods in heavily forested habitat appeared to average six to seven poults per brood, while the Bayfield County broods in farmland habitat appeared to average eight poults per brood. Survival through the summer and fall appear excellent. Winter survival is likely the critical dynamic to the success of the northern turkey population.

Wildlife staff recently requested winter observations of turkeys through local news releases. Though observations are spotty, most are of congregated groups coming into human placed food sources, i.e. bird feeders, deer feeders, farm yard waste grain and broadcast manure. Based on the reports received so far, Biologists estimate there are now about 300-400 wild turkeys wintering in Bayfield, Douglas and Ashland Counties. This is better than was anticipated, and is an encouraging base population that should quickly expand to occupy suitable habitats throughout the three counties.

Though it is still too soon to call the northern turkey introduction a long-term success, the population appears healthy and staged to expand. The initial success can be attributed to a very adaptable species, and a locally supported and well-planned introduction program. Wildlife staff will continue to monitor the northern turkey population closely, as they do with sharp-tailed grouse, to ensure everyone will be able to enjoy the excitement of spring courtship for many years to come.

Elk Antler Uncovered

In the summer of 2004 fisheries technician Josh Dumke, while doing habitat work on Sandy Run Creek, pulled a well preserved elk antler from the bottom of the stream. At first he thought it was a root. The antler was likely from Wisconsin's original elk herd and was probably shed in the late 1880's. Other antlers have been found in the Brule River and St. Croix River.

What is interesting about the antler find is that it suggests that a significant flood event happened in the Sandy Run drainage to cover the antler with sand prior to the area being logged.

Masterplan Update

Oak Salvage Variance - The variance was first advanced in November of 2004. Objections on the part of external agencies regarding process and content delayed approval. In the fall of 2004 the sales were advertised for bids. Following that, the Friends of the Brule River and Forest, through their attorneys, announced their intent to file an injunction to stop the sales unless modifications were made. The variance was modified and approved in October. The sales proceeded as modified and are now completed. The modification was to reduce the area of the Sugar Camp Hill sale managed for oak to 15 acres. This area will be planted with oaks in the spring of 2005.

In the fall of 2004 the Brule River Sportsman's Club requested a variance to permit establishment of an archery trail on the ski trail. The variance is included as part of this annual report. Comments will be accepted until May 16 regarding the variance.

Ranger Report

The Ranger crew in 2004 was Kevin Feind, Ed Culhane, Gerry Danielson, and John Bronson. John is normally a DNR pilot stationed in Siren but a day or so a week he spends on the Brule forest assisting with enforcement. In addition to this core group the property gets help from Warden Brad Biser and Superintendent Steve Petersen. The whole enforcement effort is assisted by the canoe landing hosts which were Christine Sazama and Josh McIntyre.

Nearly 60 citations were issued on the property in 2004 with the leading violations being:

1. Illegal ATV operation
2. Loose litter in a watercraft
3. Launching watercraft in an unauthorized area
4. Camping in an unauthorized area

It seems that the last several years of providing a landing host has made an impression on some people and it became fairly common to hear people say they were familiar with the laws. As a result, the rangers were less tolerant this year of loose containers in canoes. It also has become more common to hear comments that there was less litter in the river. In contrast, it appears that anglers on the lower river are leaving behind more litter along the trails and shoreline and parking areas.

Some of the interesting contacts made in 2004:

- Two people were using a seine to harvest stonefly larva from the Brule River when Ranger Feind found them with over 30 larvae. They were cited for using a seine in a trout stream and for taking larva out of the stream.
- A group of six young men left from the landing at the mouth of the Brule with camping gear in their canoes. This was into the evening and Ranger Feind, who saw them paddle past the sandbar at the mouth, told them there was no place they could legally camp. They proceeded anyway so he drove to the end of Clevedon Road where he issued citations for camping in an unauthorized area.
- Superintendent Petersen interrupted an attempted suicide. He saw a car parked where it was unusual for there to be a car so he checked on it and found a gentleman parked with his engine running and a dryer vent hose running from the tailpipe of the car into the back window. The man was still conscious and was removed from the car. The Douglas County Sheriff's Department transported him to a Duluth hospital.

The use of permanent tree stands continues to be a problem on the state forest. When stands are found they will be removed and enforcement action will be taken. These stands harm trees, "stake claim" on public land, are illegal, and contribute to other illegal activity like after-hours hunting.

In 2004 camping attendance rebounded to a more typical level, following a steep decline in 2003 because of the highway 2 road construction. Ski trail pass sales were also pretty average. Once again in 2004 the forest placed a canoe counter on the river. Based on this count an estimated 32,000 canoeists used the river. 29,600 people were estimated to have canoed in 2003.

In 2005 continued emphasis will be placed on loose liter and glass container violations. More attention will be paid to litter along the angler trails and lower river. Hunting, ATVs, and fishing will also be watched closely in 2005. Timely reporting of illegal activities by the public is critical to the ranger program. Please report illegal or suspicious activities to the Brule River State Forest office or to the Douglas County Sheriff's Department.

Special events

Most of the special events in 2004 helped celebrate the centennial of professional forest management in Wisconsin.

The **Winterwoods Snowshoe Hike and the Candlelight Ski** were both held on February 7th. 16 people showed up for the guided snowshoe hike. Around 150 people showed up for the candlelight ski. 3 miles of trail were lit up for the participants. The temperatures were 5 degrees at the start and -5 degrees at the end. Overall everyone had a good time skiing, sitting around the campfire and grilling out.

February 14th the **Brule River Timber Cruise Ski Race** took place at the Afterhours Ski trail, providing 16k and 32k freestyle and 16k classic races. Two weeks later the **Riverview Loppet** had a great turnout with better than expected conditions. A record number of 156 people participated in the 12k and 24k freestyle, 12k classic, and 5k youth races. These races are co-sponsored by the Brule Valley Ski Club and The Brule Lions Club. The Lions Club provides a lunch following the races where the results are announced and awards are presented.

On May 15th the **Brule Valley Glacial Features Auto Tour** was presented by Jay Gallagher and Josh McIntyre. *"Drive into the past and vision a land formed by mile high ice and covered by a great sea. Discover the rich geologic history of the Brule Valley"*.

On June 5th, **family fun day** at the Bois Brule fish hatchery was sponsored by the Wisconsin Department of Natural Resources, Brule River Sportsmen's Club, 4H, and Trout Unlimited. There was catch and release fishing, fly tying demonstrations, gyotaku (fish printing), hatchery tours, canoe trips, raffle prizes and gift bags for children and many other activities. The activities took place at the hatchery and the Bois Brule Campground. Over 150 people attended, despite persistent heavy rains.

Five Gems of Brule River Forest was the theme of the June 19th Natural Resources Foundation Tour lead by Josh McIntyre. *"Hike a portion of 5 spectacular gems of the Brule River State Forest: Mott's Ravine pine barrens, Brule Bog, Rush Lake Interior Beach, Brule River Boreal Forest and Bear Beach."*

Steve Petersen and Josh McIntyre lead another NRF tour on July 17th. Over 20 people enjoyed a day **canoeing** from Stones Bridge to Winneboujou Landing. Along the way the natural and cultural history of the Brule Valley was discussed as well as the current management of the state forest.

For over 300 years Native Americans, explorers and fur traders used the trail between the Bois Brule River and the St. Croix Rivers. **Hike the Oldest Trail in the State** was the NRF tour, lead by Chuck Zosel and Josh McIntyre on August 14th that hiked the route and discovered its history.

On August 21, 2004 the Chippewa Chapter of the Society of American Foresters along with BRSF hosted **Forestry Discovery Day.** The event took place at the BRSF Headquarters and provided a series of outdoor demonstration stations highlighting the tools used by foresters and explaining the work they do.

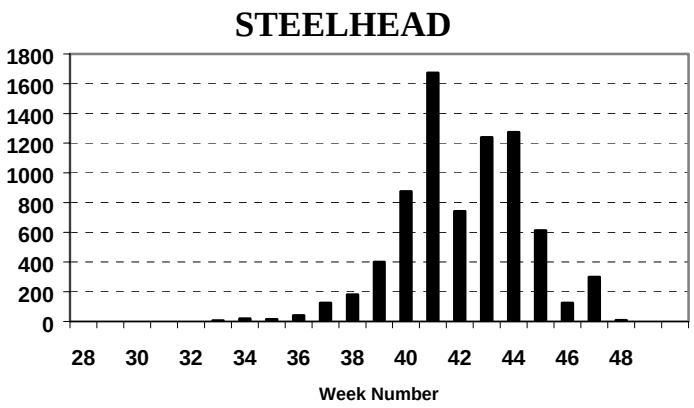
From September 28th to the 30th the Brule River State Forest hosted the biennial conference of northern state forests with over 60 people attending. On the 30th each forest superintendent used their ceremonial marking hammer to log stamp one of the logs on display at the forest headquarters on a historic logging sled.

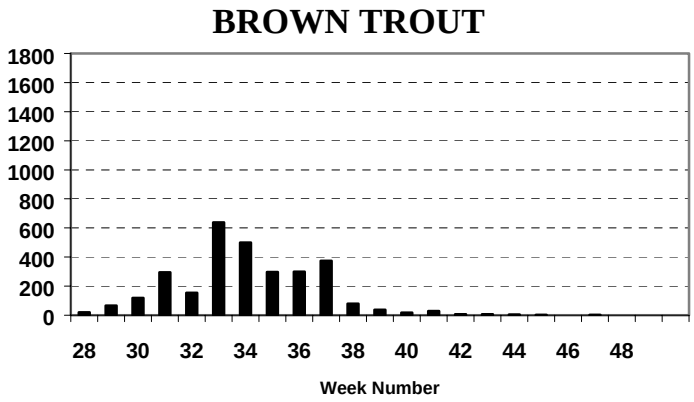
The official **state holiday tree** (a 45 foot Balsam Fir) was cut November 24th near the Afterhours Ski trail. The tree was put on display in Madison in the Capital Rotunda. The official lighting ceremony was held on December 3rd and was hosted by Senator Bob Jauch. Property staff attended the ceremony and Forester Dave Schulz did the presentation to the Governor's wife.

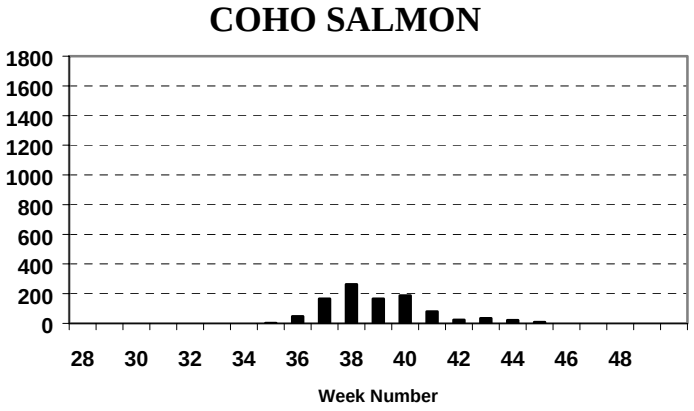
This 45 foot Balsam grew near the ski trail and served as the 2004 holiday tree in the state capital.

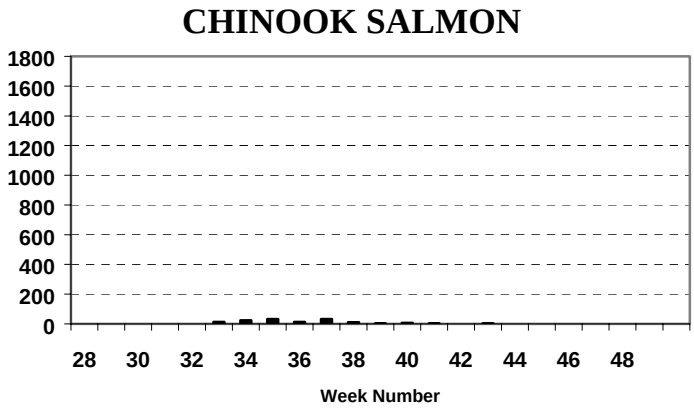
2004 BRULE RIVER FALL FISHWAY UPDATE

A total of 11735 trout and salmon were counted as they migrated upstream through the lamprey barrier/fishway from July 6 through November 29. Water levels for most of the season were again below average and likely influenced peak movement for most species and angler success. The steelhead population remains very healthy with the fall portion of the run comprised of 7635 fish. The peak occurred during the week of October 3rd. Recruitment from the "2002" year class to the fishery appears to be below average as only 268 wild three year old jacks were counted. Causes for the reduced number may be a result of poor reproduction, poor smolt survival in Lake Superior due to the extremely late and cold "2004" summer growing season or maybe a result of delayed growth and maturity due to the cold summer and selected not to enter the stream. If the latter is correct, then the fishery wouldn't suffer, otherwise some reduction in first time spawners will be realized the next two years. The brown trout run was 2941 with the peak occurring the second week of August. This was the smallest run for some time and was likely negatively influenced by poor fry survival due to the record flood in the spring of 2001. Returns of coho salmon continue to decline with only 1001counted, lowest number since monitoring began. Additionally, chinook numbers remain depressed with 145 passing by the observation window. Other salmonids counted included 6 pink salmon, 3 brook trout, 2 lake trout and 1 splake.









Year	Brown Trout	Chinook Salmon	Coho Salmon	Steelhead Fall	Steelhead Spring	Steelhead Total	Estimated Stocked Steelhead
2001-02	5533	258	1623	5484	1124	6608	1118
2002-03	4425	271	3249	7448	2035	9483	1985
2003-04	3871	113	1087	8251	1997	10248	2026
2004-05	2941	146	1001	7635	- - -	- - -	1342

Masterplan Variance Approval

Property Name: Brule River State Forest

Date Masterplan was approved: December 2002

Variance to the 2002 Brule River State Forest Masterplan: This variance to the May 2003 Brule River State Forest Masterplan permits development of an archery course on the Afterhours Ski Trail.

Approved: _____ Date: _____
Paul DeLong, Administrator, Division of Forestry

Variance Author: Steve Petersen, Superintendent, Brule River State Forest

Supporting Approvals

_____ Date:_____
Property Manager

_____ Date:_____
Area Forester

_____ Date:_____
Regional Forester

_____ Date:_____
Bureau Director

_____ Date:_____
Master Planning Manager, LF

Supporting Information

Purpose and need for the Variance:
The purpose of this variance is to permit development of an archery course along the Afterhours Ski Trail located on the Brule River State Forest. This activity is not expressly permitted in the May 2003 masterplan for the state forest. The idea for this course was discussed by property staff at the September 2004 public meeting and received public support. Following that meeting the Brule River Sportsman's Club submitted a request to the forest superintendent for a masterplan variance to permit this proposed course.

The intended development of the trail would be low impact with due consideration to the area's present uses, aesthetics, and natural condition.

- The proposed course would use the entry/return loop trails, roughly half a mile out of a 16.5 mile system (3% of the total trails).
- The course would be seasonally operated from May 1 to October 30 to eliminate conflict with skiers.
- Shooting station signs and targets would be removed prior to the ski season. The backstops would remain.
- Targets would be chosen that blend with the surrounding and avoid clashing with the natural experience.
- Targets would be oriented to maximize the safety of other shooters and other trails users that may not be aware of the course.
- As many as 30 shooting stations would be developed along the roughly half mile trail.
- Course layout would consider National Field Archery Association guidelines or other sanctioning body's guidelines.
- The cost to develop the course (estimated to be around $3,000 to $5,000) is expected to be paid from donations and the work done by volunteers with oversight and assistance from property staff. Several groups and individuals have already expressed an interest in funding this.
- Ongoing costs of operation, for instance to purchase replacement targets, would be supported with donations. There are a number of organizations that provide ongoing operations support for archery trails, particularly if they are used by youths.
- Brush would be cleared where necessary for the trail to the target but otherwise it is not expected that trees would be removed to facilitate the course. Target locations would be chosen with this in mind.

A typical shooting station would have:

- A sign identifying it as a station.
- A short metal stake that the shooter would "toe" to establish the distance to the target.
- A trail roughly four feet wide and surfaced with bark ships or a similar product that would travel to the target from the shooting station.
- A target backstop filled with sand. The backstop would be constructed with round wood posts joined by treated lumber to create a three sided box.
- Three feet in front of the backstop would be two additional posts used to hold a target or as a reference for freestanding targets.
- The target could be freestanding commercially made 3 dimensional foam animal targets, cardboard animal shaped cutouts, or Olympic style round targets.
- The distance from a shooting station to the target ranges from 7 yards to 80 yards and averages about 25 yards.
- Certain shooting stations may have a rustic bench from which the shooter is expected to shoot.

Historically there have been three archery courses on the Brule River State Forest, though none of them are still maintained. At one time an indoor archery range was located in the former dining hall of the CCC camp. Property staff has also been told that archery courses existed on what is now the Stony Hill Nature Trail and near the building that is now the Highland Town Hall.

Anticipated Primary Benefits of the Proposed Variance:
The primary benefit is to respond to a public request for this opportunity. Some of the reasons the public shared for developing this course included:

- This would meet a request to provide another compatible recreation opportunity on the state forest.
- The public desires a more natural venue for shooting archery and this could be done at this location.
- This would restore a historical opportunity on the state forest. In the past there were three ranges or courses on the property.
- It would complement the archery curriculum offered at some of the area schools.

Additional Anticipated Benefits:

- This archery course would provide a positive social opportunity for the community.
- Archery is a popular sport in the community, not only among hunters. The closest similar opportunities are located in the Superior Municipal Forest and the Aurora Ouisconsin Outdoor Club near Hawthorne. This would provide an additional more convenient location for archery proactive.
- The course would make year round use of already developed infrastructure at the ski trail
- The existing facilities together with the course would provide an opportunity to facilitate hunter education
- An increase in the number of people using this area will increase the level of security and protect the state's infrastructure investment at the Afterhours Trail.

Unavoidable Adverse Impacts:

- The trails are frequently used by hikers and dog walkers and while there shouldn't be a direct conflict those people would see more activity on this segment of the trails. Dog walkers will need to leash and control their pets in the area of the targets.
- Trails to the targets will increase foot traffic off the ski trail. This will be mitigated by surfacing the trails to the targets with wood chips or a similar product.
- Some people may object to the idea of targets placed along the trail. During the 2004-2005 ski season a foam 3 dimensional deer was placed about 25 yards off the ski trail near the start line for a ski race. Not a single comment noting the target was received by property staff.

Compatibility with Statutes, Codes, and Department Policies:

- The area is currently open to all methods of hunting and is frequently used by hunters.
- The trails are identified as hunter walking trails.
- The property masterplan does not conflict with this use.
- Nothing in NR 45 would prohibit this use.
- Elevated stands are prohibited from being left on the on state forest land overnight. This course would not use elevated shooting stations. Instead, topography would be used to simulate shooting from a higher elevation than the target.

Federal Aid Limitations (cite if any federal aid monies are involved with either acquisition or management of the property and whether the proposed plan variance is compatible with the aid requirements):

There are no federal funds involved with the management of the area covered by the proposed variance.

How the Masterplan Supports the Proposed Variance (cite how the proposed variance is consistent with the provisions of the masterplan): The Afterhours Trails are within Area 6, Afterhours Recreation Area described on page 88 of the 2002 masterplan. The area is classified a Type 3 Recreational Use Setting. The objective of this setting is to provide readily accessible areas with modest recreational facilities offering opportunities at different times and places for a variety of dispersed recreational uses and experiences. Landscapes within the setting may vary from natural appearing to highly altered. The proposed development of this archery course is not inconsistent with the described recreational use setting.

At the time the masterplan was developed the idea to develop an archery course was not considered. The seasonal nature of skiing and archery complement each other and if this idea had been discussed during development of the masterplan it likely would have been supported.

The Public Review Process Used (summary of who was notified about the proposal or otherwise reviewed the proposal and the meetings, mailings, and other techniques used):

The concept was first discussed at the September 2004 public meeting for the Brule River State Forest. The forest superintendent shared the idea with the membership of the Brule River Sportsman's Club at their September meeting. At that meeting the club passed a motion to request a variance to the masterplan to permit the archery course. The variance will be presented at the April 16, 2005 public meeting for the Brule River State Forest

Description of the Support and/or Opposition to the Proposed Variance (including reasons for the various positions taken) and Any Unresolved Issues or Concerns:

Letters supporting this course have also been received from The Ruffed Grouse Society, The Isaak Walton League, The Douglas County Fish and Game League, The Gitchee Gummee Chapter of the National Wild Turkey Federation, The Brule Valley Ski Club, and the ABC Sportsman's Club.

BRSF Prescribed Burn Plans

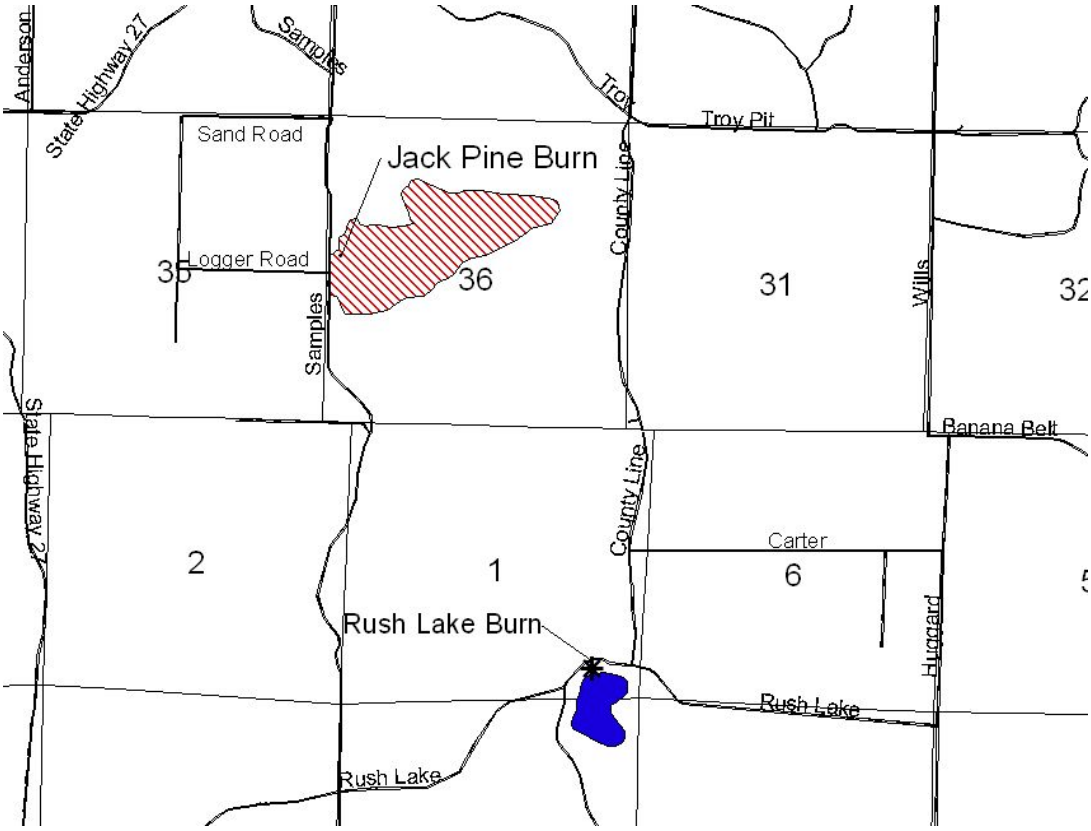
The BRSF is planning to conduct 2 prescribed burns on the forest during 2005. Both burn areas fall within the Troy Pit Pines (area 8) forest production area.

Jack Pine Regeneration Burn

This burn area is located within section 36, T47N, R10E. The total acreage for this burn area is 112 acres. The objective for this burn is to regenerate jack pine on this site following logging activity which is planned to occur in the spring of 2005. The timber sale to cut the mature jack pine was designed with this in mind, and firebreaks (driveable roadways) were cut in the fall of 2004 and will be used for timber hauling purposes during the timber sale. The slash from the cutting will be left scattered across the area and will be burned in the fall of 2005 to open serotinous (needs heat to open) cones and prepare a suitable seedbed for the jack pine seed. Scattered jack pine will be left for an additional seed source as well as additional seed being scattered to assure regeneration of jack pine.

Spotted Knapweed Control

This burn area is to occur along the shore of Rush Lake, a state natural area. The objective of this burn is to control the population of spotted knapweed that is currently occupying the "beach" site at Rush Lake. The total burn area is under 2 acres in size. The BRSF staff is working closely with Endangered Resources staff who suggested the burn on this site to accomplish the goal of controlling this invasive species. This burn will occur sometime during this spring when the knapweed plants have reached the correct phenological stage and when weather conditions allow.



Brule River State Forest
Planting Specifications - Spring 2005 Planting

Jack Pine Planting Area = 24 acres

1) Site has been furrowed in the fall of 2004.
2) Plant trees at an average of 6 feet between the trees within the previously prepared rows.
3) Trees to be planted are 2 year old conifers supplied by the landowner.
4) Total number of trees to be planted is 20,000 trees.

Oak Planting Area = 15 acres

1) Site was harvested (clear cut) during winter of 2005. No further site prep will be done.
2) Plant trees at an average of a 9 foot spacing within the planting area.
3) Trees to be planted are 2 year old red oak hardwoods to be supplied on the planting site by the landowner.
4) Total number of trees to be planted is 7,500.

Re-Planting Areas = 301 acres

1) Planting spots to be selected by contractor in areas of previous tree mortality.
2) Sites to be planted were previously trench scarified and planted in spring of 2003.
3) Planting density will vary between 500 and 800 trees per acre.
4) Trees to be planted are 2 year old conifers supplied by the landowner.
5) Total number of trees to be planted is 198,000 trees.

All work must be completed before May 20, 2005

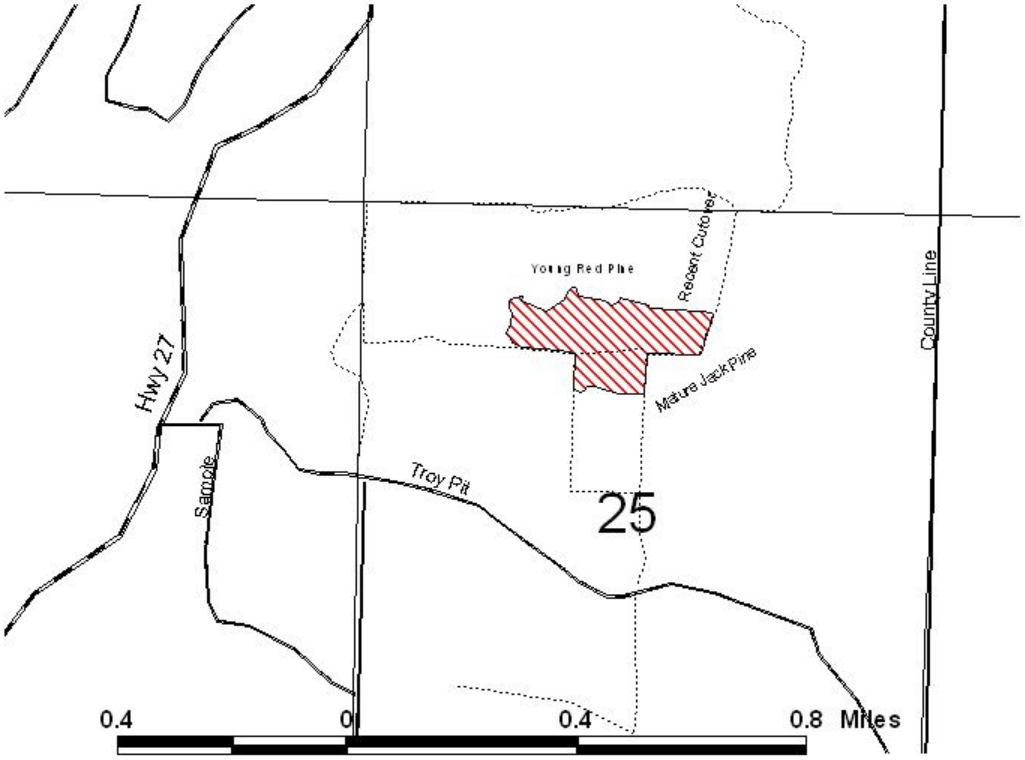
For further information contact:

Dave Schulz
6250 S. Ranger Road
Brule, WI 54820

715-372-5678

Brule River State Forest

Troy Pit Planting - Spring 2005
T47N R10W Sec 25



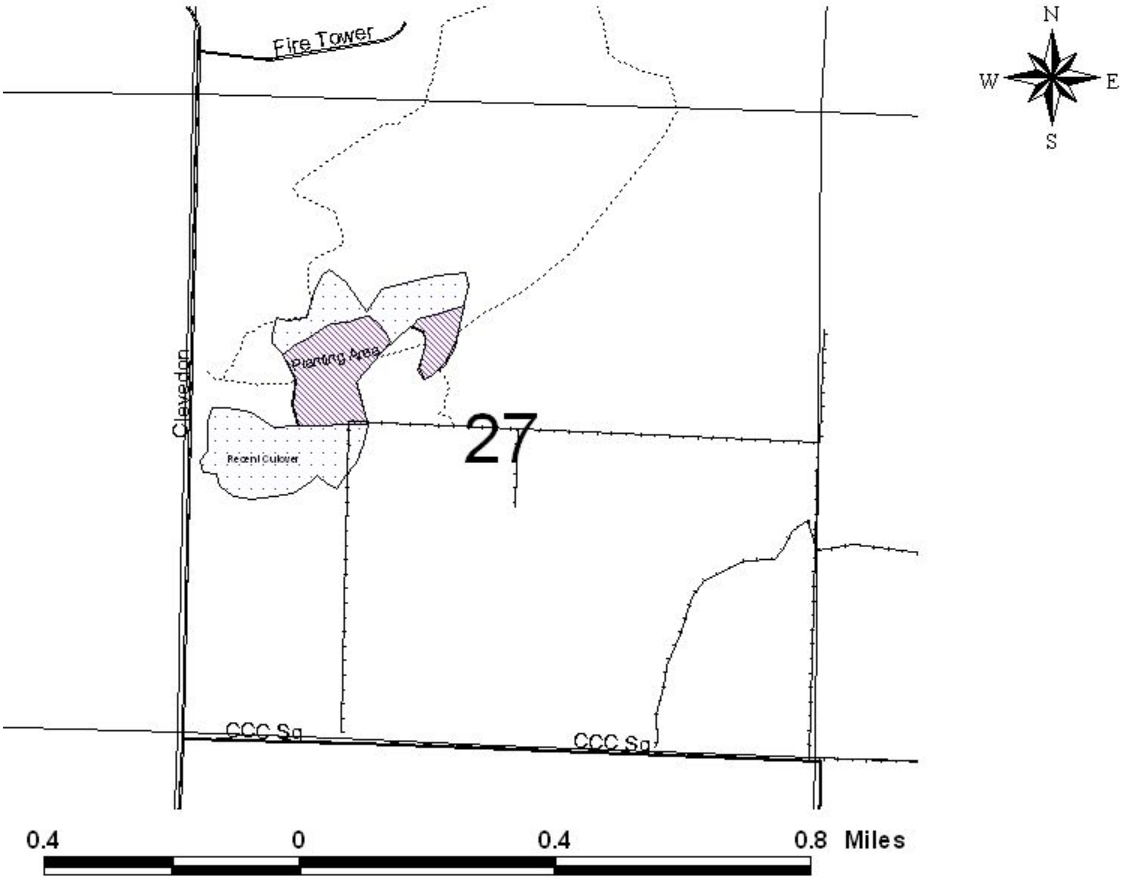
Planting Area 24 acres
Plant 20,000 jack pine in prepared furrows

County and state hwys
Town roads
Woods roads
Troy pit planting area

N
W E
S

Brule River State Forest
2005 Oak Planting Area

Douglas County, Wisconsin
T 48N R 10W Sec. 27



Area to be planted was harvested during winter of 2004-05. No further site prep will be done.

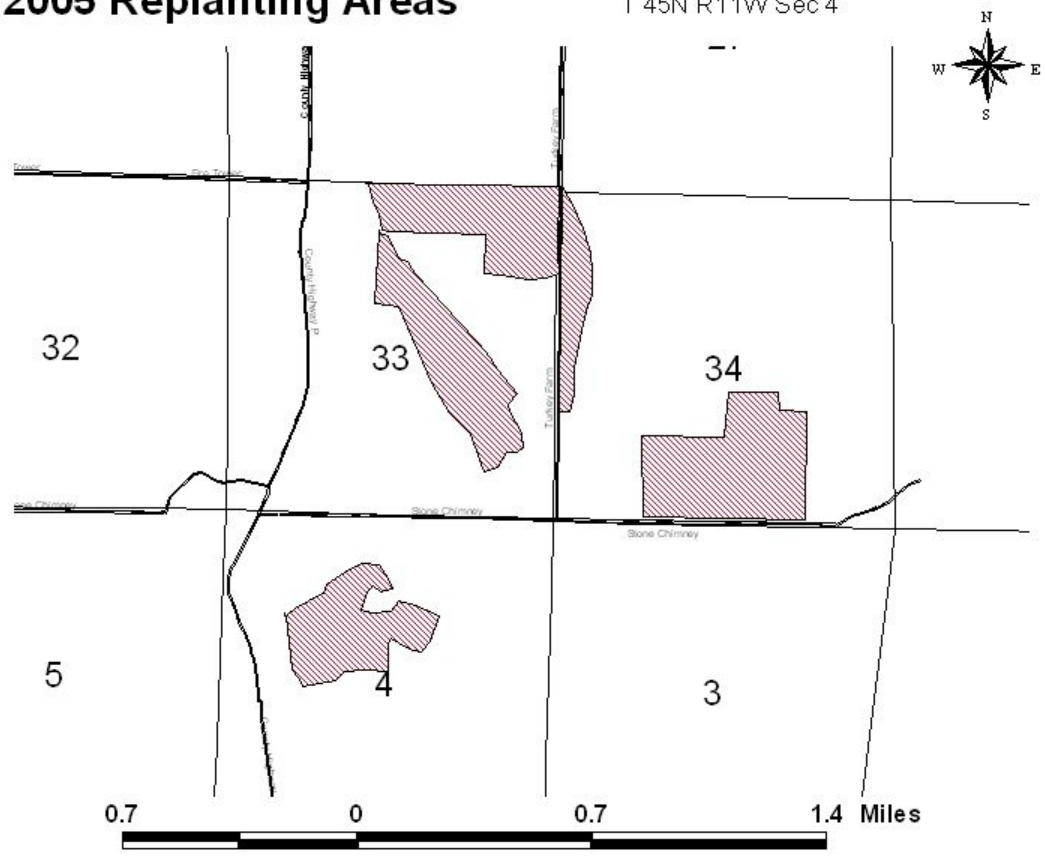
Total area to be planted is 15 acres with a total tree numbers of 7,500.

Trees are 2 year old red oak hardwoods to be supplied by the landowner on the planting site.

Hunter Walking Trail
Oak Planting Area
Recent Cutover Area
Bayfield road hiking trail
Roads
Secrdtrs.shp

Brule River State Forest
2005 Replanting Areas

Douglas County, Wisconsin
T 46N R11W Sec 33,34
T 45N R11W Sec 4



Replanting Area = 301 Acres

Areas to be replanted were disk trenched in fall of 2002 and planted in spring in 2003.

Total area to be replanted is 301 acres with total tree numbers of 198,000.

Trees are 2 yr old conifers to be supplied by landowner on the planting site.

Roads
2005 planting sites

NSF International Strategic Registrations, Ltd.

A Subsidiary of NSF International
789 North Dixboro Road, Ann Arbor, Michigan 48105
(888) NSF-9000

Certificate of Verification

This certifies that

Wisconsin's State Forest Program

101 S. Webster St. FR/4
Madison, WI 53703

has been assessed by NSF-ISR and found to be in conformance to the following standard(s):

Sustainable Forestry Initiative (SFI)SM

Scope of Verification:
The SFI Program of Wisconsin DNR on the State Forests including land management operations and related sustainable forestry activities. State Forests are: Black River State Forest, Brule River, Coulee Experimental, Flambeau River, Governor Knowles, Kettle Moraine- Northern and Southern units, Northern Highland/American Legion, Peshtigo River and Point Beach.

Certificate Number: 1Y941-S1
Certificate Issue Date: 05/10/2004
Registration Date*: 05/05/2004

Kevan P. Lawlor, President
NSF-ISR

SUSTAINABLE FORESTRY INITIATIVE

Authorized Registration and Accreditation Marks

This certificate is the property of NSF-ISR and must be returned upon request. *Company is audited for compliance at regular intervals. To verify registration call (888) NSF-9000 or visit our web site at www.nsf-isr.org. Sustainable Forestry Initiative® and SFI® are service marks owned by the American Forest & Paper Association.

WELL-MANAGED FOREST CERTIFICATION

Scientific Certification Systems does hereby certify that an independent Forest Management evaluation under the Forest Conservation Program has been conducted on the company or district named below and that this company or district has been shown to meet all of the necessary qualifications to be certified as a Well-Managed Forest, in accordance with the Forest Stewardship Council's Principles and Criteria.

Wisconsin's State Forests Program

SCS Certification Registration Number: SCS-FM/COC-00070N

101 S. Webster Street, P.O. Box 7921, Madison, WI 53707-7921

CERTIFIED SPECIES: pine, spruce-fir, northern hardwoods, central hardwoods, oak, red maple, aspen, and other merchantable species.

SCS Forest Conservation Program
SCIENTIFIC CERTIFICATION SYSTEMS
2000 Powell Street, Suite 1350
Emeryville, CA 94608 USA Tel 510-452-8000 Fax 510-452-8001
FSC Registration #

Authorized Signature 5/03/2004 *Dated* 05/03/2009 *Expiration*

FSC
ACCREDITED
FSC Trademark ©1996
Forest Stewardship Council A.C.
FSC-SECR-0036

TRACT 1-05
Land Management Area = Troy Pit Pines
Jack Pine – 1939 Origin
257 Acres

STAND DESCRIPTION

This area is a portion of a large natural stand of jack pine that is 66 years old. This stand originated following the very large forest fires which occurred in this area during 1936. Fires during this year burned approximately 100,000 acres between Hwy 27 and the town of Iron River. Primary species within the stand is jack pine, with components of red pine, white pine, aspen, red maple, and scrub oak. The area to be treated with this timber sale will total up to 257 acres. Portions of this stand were harvested approximately 10 years ago and replanted to red pine.

GOALS

This stand falls within the Troy Pit Pines management unit as listed in the Brule River State Forest Master Plan. Overall forest management goals within this management unit are to maintain a dry pine forest community. The goal for this stand is regenerate jack pine to maintain this species on the site.

ECOLOGICAL CONSIDERATIONS AND SILVICULTURAL PRESCRIPTION

Due to the age of this stand along with an anticipated outbreak of jack pine budworm in 2005 this stand of overmature jack pine will be harvested by a complete removal of all jack pine and hardwood species. There will be areas of hardwoods and other pines left uncut which will break up the sale area. Very steep slopes along Samples road will also be left uncut and allowed to convert to hardwoods such as scrub oak and red maple. Following the harvest, one of 2 treatment option will be completed to facilitate the regeneration of jack pine on the site. Prescribed burning will be the first choice of treatments. Prescribed burning will follow within 2 years following the harvest to provide an adequate seedbed and open serotinous jack pine cones to promote jack pine regeneration. If for some reason the prescribed burn cannot be completed (poor weather conditions, staffing shortages) anchor chaining will be completed to facilitate the maintenance of the jack pine type on this site. A prescribed fire in an area such as this, with highly flammable fuels surrounding the stand, requires the construction of a minimum of 12 foot wide roadway to function as a fire break. There are some ecological advantages to burning, but can be difficult to manage logistically. The end result of the burning or site scarification should be a fully stocked stand of jack pine seedlings within 5 years of the harvest. It is very likely that both types of post sale treatments will be completed on portions of this stand. Another treatment option is to scarify the site before harvest with small dozers to prepare the seedbed. We are currently experimenting with this technique on other sites within the BRSF. This treatment option tends to work best in areas where there is a heavy understory of scrub oak and maple that needs to be set back so it will not interfere with the intended results of jack pine regeneration. The drawback to this treatment is much staff time is needed to complete a large area such as this. No matter which regeneration scheme is used, the future stand species composition will be very similar to the existing stand.

WATER QUALITY

The site is flat to gently rolling sand, and is not adjacent to any water body, therefore there is little potential to influence surface water quality. No negative impact is expected. Local DNR water quality staff will be consulted before this tract is offered for sale.

AESTHETICS

Portions of this harvest activity may be seen from Samples road as well as from South Shore Grade/County Line Road. The shape and size of the sale will provide a large open area, but due to topography and leave pockets, not all of the area will be able to be viewed at once. Due to location and patterns of public use, aesthetic impacts will be minimal.

WILDLIFE

This area is used by game and non-game, birds and animals. This harvest will result in early successional habitat which will promote species that prefer this habitat. The local DNR wildlife manager has been consulted.

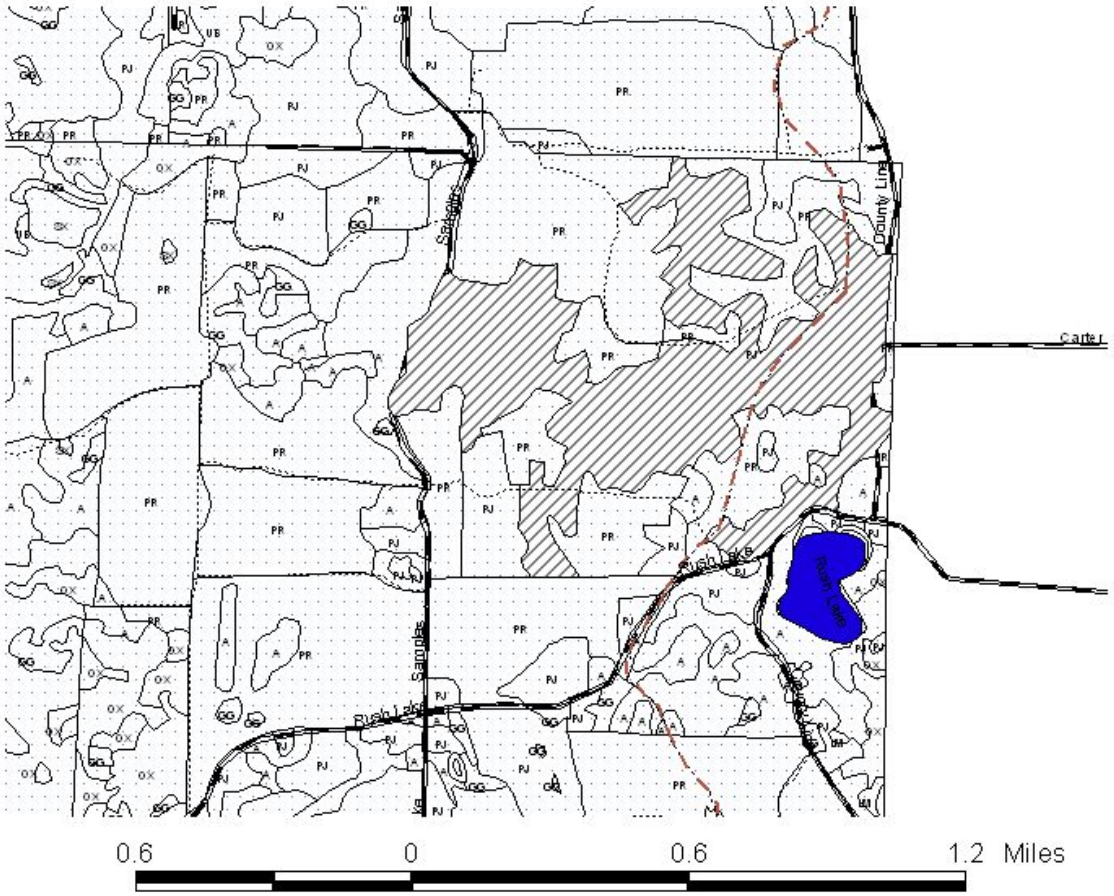
ENDANGERED RESOURCES

The staff of the Brule River State Forest is not aware of any potential negative impacts to any listed or endangered plant species, animal species, nor rare community that may occur as a result of this management activity. Bureau of Endangered Resources staff will be consulted before this tract is offered for sale. Natural Heritage Inventory data has been consulted.

RECREATION

Uses of this area include snowmobiling, hunting, wildlife viewing, and hiking. The impact on hunting and wildlife viewing will be to diversify the habitat over time due to understory development. The roads that are to be constructed as fire breaks will be destroyed and allowed to grow over once the prescribed fire is completed. The snowmobile trail will be impacted by opening up the area along a short segment of the trail.

Tract 1-05
Spider Jack Pine
T46 R10 Sec 1



0.6 0 0.6 1.2 Miles

Snowmobile Trail
Woods Roads
Lakes
Tract 1-05
Public Roads
Tract 6-05

N
W E
S

Jack Pine Regeneration Harvest. 257 acres.

TRACT 2-05
Land Management Area = Pine Forest and Barrens
Jack Pine – 1939 Origin
143 Acres

STAND DESCRIPTION

This area is a portion of a large natural stand of jack pine that is 65 years old. This stand originated following the very large forest fires which occurred in this area during 1936. Fires during this year burned approximately 100,000 acres between Hwy 27 and the town of Iron River. Primary species within the stand is jack pine, with components of red pine, white pine, aspen, red maple, and scrub oak. The area to be treated with this timber sale will total up to 143 acres.

GOALS

This stand falls within the Pine Forest and Barrens management unit as listed in the Brule River State Forest Master Plan. Overall forest management goals within this management unit are to maintain a jack pine as a dominant tree species. The goal for this stand is regenerate jack pine to maintain this species on the site.

ECOLOGICAL CONSIDERATIONS AND SILVICULTURAL PRESCRIPTION

Due to the age of this stand along with an anticipated outbreak of jack pine budworm in 2005 this stand of overmature jack pine will be harvested by a complete removal of all jack pine and hardwood species. Significant defoliation was noted within this stand during the summer of 2004. Following the harvest, one of 2 treatment options will be completed to facilitate the regeneration of jack pine on the site. Prescribed burning will be the first choice of treatments. Prescribed burning will follow within 2 years following the harvest to provide an adequate seedbed and open serotinous jack pine cones to promote jack pine regeneration. If for some reason the prescribed burn cannot be completed (poor weather conditions, staffing shortages) anchor chaining will be completed to facilitate the maintenance of the jack pine type on this site. A prescribed fire in an area such as this, with highly flammable fuels surrounding the stand, requires the construction of a minimum of 12 foot wide roadway to function as a fire break. There are some ecological advantages to burning, but can be difficult to manage logistically. The end result of the burning or site scarification should be a fully stocked stand of jack pine seedlings within 5 years of the harvest. It is very likely that both types of post sale treatments could be completed on portions of this stand. Another treatment option is to scarify the site before harvest with small dozers to prepare the seedbed. We are currently experimenting with this technique on other sites within the BRSF. This treatment option tends to work best in areas where there is a heavy understory of scrub oak and maple that needs to be set back so it will not interfere with the intended results of jack pine regeneration. The drawback to this treatment is much staff time is needed to complete a large area such as this. No matter which regeneration scheme is used, the future stand species composition will be very similar to the existing stand.

WATER QUALITY

The site is flat to gently rolling sand, and is not adjacent to any water body, therefore there is little potential to influence surface water quality. No negative impact is expected. Local DNR water quality staff will be consulted before this tract is offered for sale.

AESTHETICS

Portions of this harvest activity may be seen from Hwy S as well as from Bong Forest and Motts Ravine Roads. The shape and size of the sale will provide a large open area, but due to topography and leave pockets, not all of the area will be able to be viewed at once. Due to location and patterns of public use, aesthetic impacts will be minimal.

WILDLIFE

This area is used by game and non-game, birds and animals. This harvest will result in early successional habitat which will promote species that prefer this habitat. The local DNR wildlife manager has been consulted.

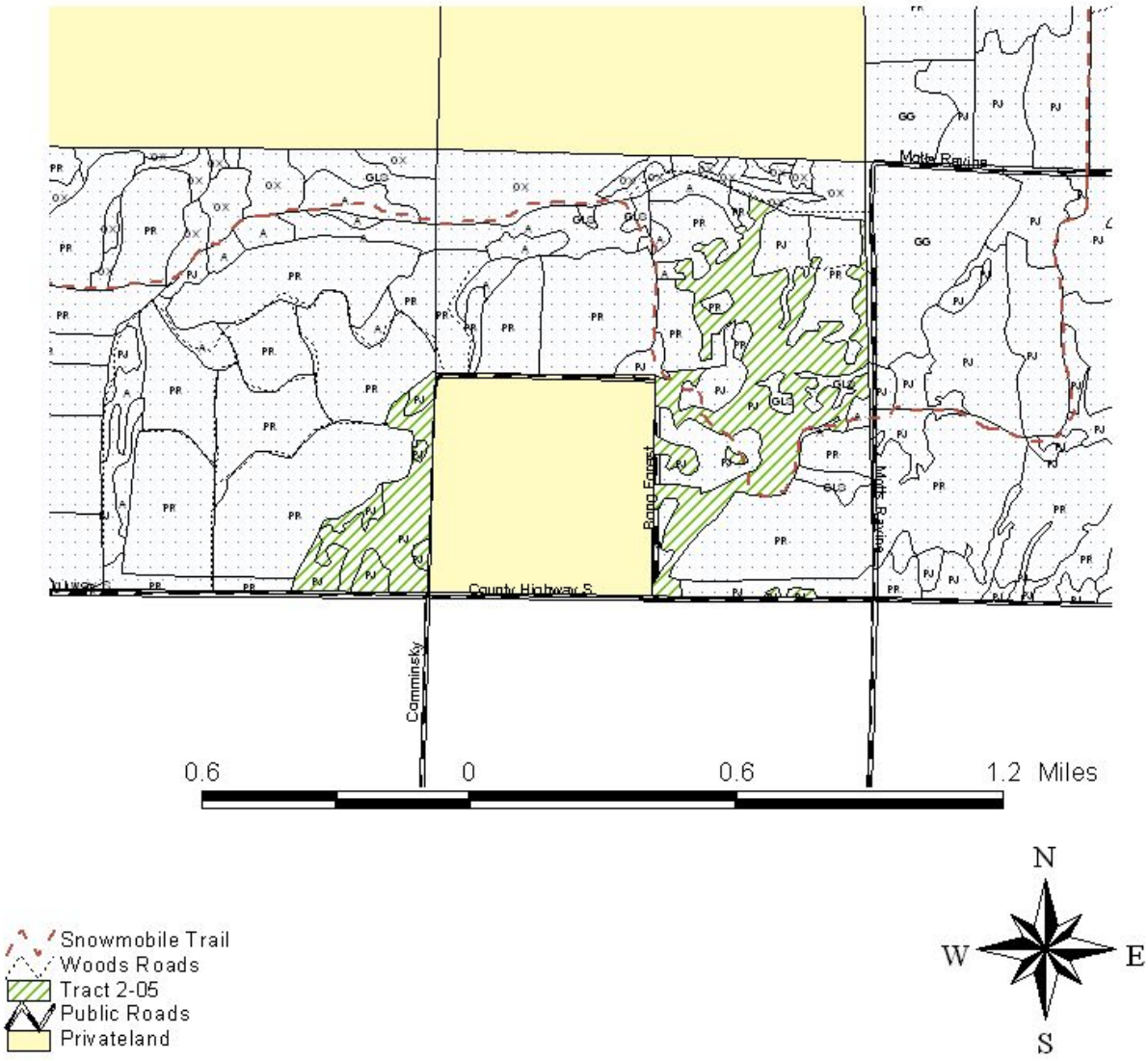
ENDANGERED RESOURCES

The staff of the Brule River State Forest is not aware of any potential negative impacts to any listed or endangered plant species, animal species, nor rare community that may occur as a result of this management activity. Bureau of Endangered Resources staff will be consulted before this tract is offered for sale. Natural Heritage Inventory data has been consulted.

RECREATION

Uses of this area include snowmobiling, hunting, wildlife viewing, and hiking. The impact on hunting and wildlife viewing will be to diversify the habitat over time due to understory development. The roads that are to be constructed as fire breaks will be destroyed and allowed to grow over once the prescribed fire is completed. The snowmobile trail will be impacted by opening up the area along a short segment of the trail.

Tract 2-05
Angry Badger Jack Pine
T46N R10E Sec 32,33



Jack Pine regeneration harvest. 143 acres.

TRACT 3-05
Land Management Area = Troy Pit Pines
Jack Pine – 1949 Origin
139 Acres

STAND DESCRIPTION

This area is a portion of a large stand of jack pine that is 56 years old. This stand was planted between 1948 and 1950. Planting records indicate that most areas of this stand were replanted due to poor initial survival. Primary species within the stand is jack pine, with small components of red pine, white pine, aspen, red maple, and scrub oak. The area to be treated with this timber sale will total up to 139 acres.

GOALS

This stand falls within the Troy Pit Pines management unit as listed in the Brule River State Forest Master Plan. Overall forest management goals within this management unit are to maintain a dry pine forest community. The goal for this stand is regenerate jack pine to maintain this species on the site.

ECOLOGICAL CONSIDERATIONS AND SILVICULTURAL PRESCRIPTION

Due to the age of this stand along with an anticipated outbreak of jack pine budworm in 2005 this stand of over mature jack pine will be harvested by a complete removal of all jack pine and hardwood species. Following the harvest, one of 2 treatment option will be completed to facilitate the regeneration of jack pine on the site. Prescribed burning will be the first choice of treatments. Prescribed burning will follow within 2 years following the harvest to provide an adequate seedbed and open serotinous jack pine cones to promote jack pine regeneration. If for some reason the prescribed burn cannot be completed (poor weather conditions, staffing shortages) anchor chaining will be completed to facilitate the maintenance of the jack pine type on this site. A prescribed fire in an area such as this, with highly flammable fuels surrounding the stand, requires the construction of a minimum of 12 foot wide roadway to function as a fire break. There are some ecological advantages to burning, but can be difficult to manage logistically. The end result of the burning or site scarification should be a fully stocked stand of jack pine seedlings within 5 years of the harvest. It is very likely that both types of post sale treatments will be completed on portions of this stand. Another treatment option is to scarify the site before harvest with small dozers to prepare the seedbed. We are currently experimenting with this technique on other sites within the BRSF. This treatment option tends to work best in areas where there is a heavy understory of scrub oak and maple that needs to be set back so it will not interfere with the intended results of jack pine regeneration. The drawback to this treatment is much staff time is needed to complete a large area such as this. No matter which regeneration scheme is used, the future stand species composition will be very similar to the existing stand.

WATER QUALITY

The site ranges from fairly flat to hilly and is made up of very dry and sandy soils. The closest water body is Rush Lake, with an uncut buffer between the harvest and Rush Lake. No negative impact to water quality is expected. Local DNR water quality staff will be consulted before this tract is offered for sale.

AESTHETICS

Portions of this harvest activity may be seen from Rush Lake road as well as Volker road. The shape and size of the sale will provide a large open area, but due to topography and the way the stand is laid out, not all of the area will be able to be viewed at once. Due to location and patterns of public use, aesthetic impacts will be minimal.

WILDLIFE

This area is used by game and non-game, birds and animals. This harvest will result in early successional habitat which will promote species that prefer this habitat. The local DNR wildlife manager has been consulted.

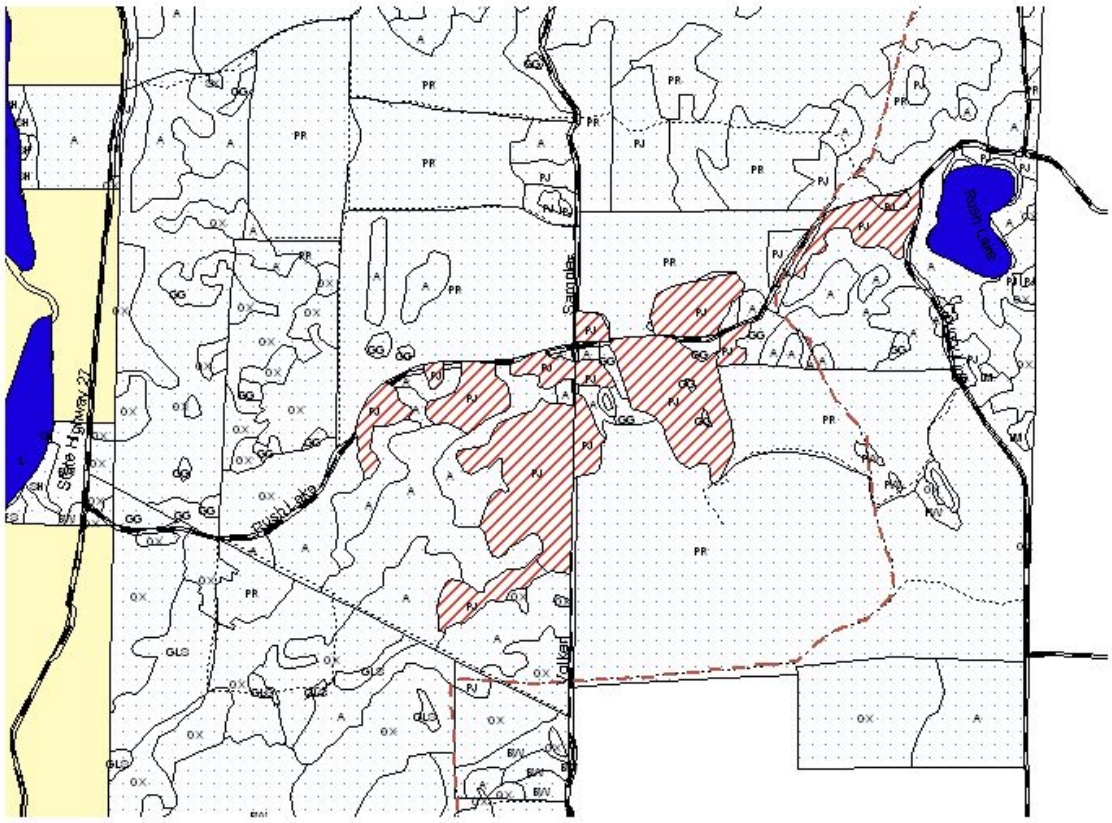
ENDANGERED RESOURCES

The staff of the Brule River State Forest is not aware of any potential negative impacts to any listed or endangered plant species, animal species, nor rare community that may occur as a result of this management activity. Bureau of Endangered Resources staff will be consulted before this tract is offered for sale. Natural Heritage Inventory data has been consulted.

RECREATION

Uses of this area primarily include hunting, wildlife viewing, and hiking. The impact on hunting and wildlife viewing will be to diversify the habitat over time due to understory development. The roads that are to be constructed as fire breaks will be destroyed and allowed to grow over once the prescribed fire is completed.

Tract 3-05
Depression Jack Pine
T46 R10 Sec 11,12



0.6 0 0.6 1.2 Miles

Snowmobile Trail
Woods Roads
Lakes
Tract 3-05
Public Roads
Privateland

N
W E
S

Jack Pine regeneration harvest. 139 acres.

TRACT 4-05
Land Management Area = Troy Pit Pines
Jack Pine – 1938 and 1950 Origin
132 Acres

STAND DESCRIPTION

This area is a portion of a large stand of jack pine that is 55-67 years old. The western area was planted in 1938 and eastern section was planted in 1950. Primary species within the stand is jack pine, with small components of red pine, white pine, and birch. The western section has areas where there is a secondary type of birch in the overstory. The area to be treated with this timber sale will total up to 132 acres.

GOALS

This stand falls within the Troy Pit Pines management unit as listed in the Brule River State Forest Master Plan. Overall forest management goals within this management unit are to maintain a dry pine forest community. The goal for this stand is regenerate jack pine to maintain this species on the site.

ECOLOGICAL CONSIDERATIONS AND SILVICULTURAL PRESCRIPTION

Due to the age of this stand along with an anticipated outbreak of jack pine budworm in 2005 this stand of overmature jack pine will be harvested by a complete removal of all jack pine and hardwood species. Following the harvest, one of 2 treatment option will be completed to facilitate the regeneration of jack pine on the site. Prescribed burning will be the first choice of treatments. Prescribed burning will follow within 2 years following the harvest to provide an adequate seedbed and open serotinous jack pine cones to promote jack pine regeneration. If for some reason the prescribed burn cannot be completed (poor weather conditions, staffing shortages) anchor chaining will be completed to facilitate the maintenance of the jack pine type on this site. A prescribed fire in an area such as this, with highly flammable fuels surrounding the stand, requires the construction of a minimum of 12 foot wide roadway to function as a fire break. There are some ecological advantages to burning, but can be difficult to manage logistically. The end result of the burning or site scarification should be a fully stocked stand of jack pine seedlings within 5 years of the harvest. It is very likely that both types of post sale treatments will be completed on portions of this stand. Another treatment option is to scarify the site before harvest with small dozers to prepare the seedbed. We are currently experimenting with this technique on other sites within the BRSF. This treatment option tends to work best in areas where there is a heavy understory of scrub oak and maple that needs to be set back so it will not interfere with the intended results of jack pine regeneration. The drawback to this treatment is much staff time is needed to complete a large area such as this. No matter which regeneration scheme is used, the future stand species composition will be very similar to the existing stand.

WATER QUALITY

The site ranges from fairly flat to hilly and is made up of very dry and sandy soils. The closest water body are some small wetlands, which will be protected with an uncut buffer between them and the harvested area. No negative impact to water quality is expected. Local DNR water quality staff will be consulted before this tract is offered for sale.

AESTHETICS

Portions of this harvest activity may be seen from Troy Pit road and County Line road. The shape and size of the sale will provide a large open area, but due to topography and the way the stand is laid out, not all of the area will be able to be viewed at once. Due to location and patterns of public use, aesthetic impacts will be minimal.

WILDLIFE

This area is used by game and non-game, birds and animals. This harvest will result in early successional habitat which will promote species that prefer this habitat. The local DNR wildlife manager has been consulted.

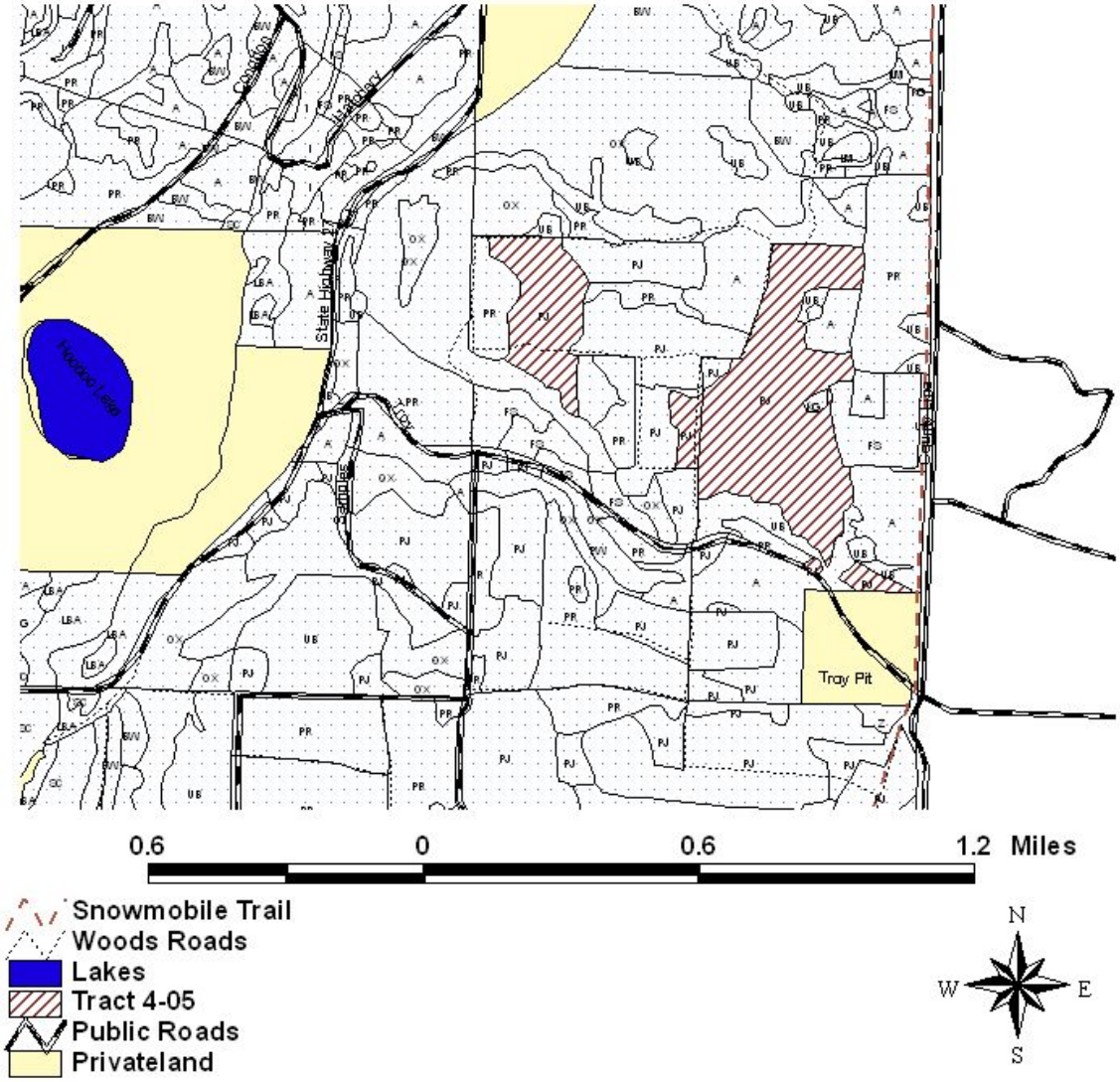
ENDANGERED RESOURCES

The staff of the Brule River State Forest is not aware of any potential negative impacts to any listed or endangered plant species, animal species, nor rare community that may occur as a result of this management activity. Bureau of Endangered Resources staff will be consulted before this tract is offered for sale. Natural Heritage Inventory data has been consulted.

RECREATION

Uses of this area primarily include hunting, wildlife viewing, and hiking. The impact on hunting and wildlife viewing will be to diversify the habitat over time due to understory development. The roads that are to be constructed as fire breaks will be destroyed and allowed to grow over once the prescribed fire is completed.

Tract 4-05
Ridgetop Jack Pine
T47N R10E Sec 25



Jack Pine regeneration harvest. 132 acres.

Brule River State Forest--TRACT 5-05
Forgotten Jack Pine
Land Management Area = Gordon Annex Forest Production Area (area 11)
Jack Pine -1945 origin – regeneration harvest-127 acres
Red Pine Plantation –1959 origin, second thinning -48 acres

STAND DESCRIPTIONS
This proposed sale includes the remaining old (50+ year old) jack pine within the property boundary of the Gordon Unit of the BRSF, along with a red pine plantation adjacent to one of the blocks of jack pine. These stands of jack pine are generally of very poor quality, low stocking rates and lots of hazel brush in the understory. Other areas of jack pine within this Gordon property were cut in the early 1990's, and originated in the same years as this jack pine. An expected outbreak of jack pine budworm in 2005 will likely cause considerable mortality in the trees that are left within these stands. The red pine was planted in 1959 and is presently overstocked and in need of a thinning. The red pine areas were previously thinned in 1990 by removal of every other row of trees.

GOALS
This stand falls within the Gordon Annex forest production area management unit as listed in the Brule River State Forest Master Plan. Overall forest management goals within this management unit are manage to provide renewable forest products. An aesthetic goal is to maintain a healthy mix of tree species within aesthetic areas along roads and river corridors.

ECOLOGICAL CONSIDERATIONS AND SILVICULTURAL PRESCRIPTION
The jack pine will be harvested by complete removal of all trees greater than one inch in diameter. There are considerable areas within these jack pine stands that simply do not contain many trees, therefore the actual cut area will be less than the acreage listed. Following the harvest, the sites will be prepared for planting through furrowing and then planted with jack pine. The red pine stands will be thinned marked selective thinnings. Residual basal areas following this thinning will be between 90-120 square feet per acre. .Following the thinning, species diversity and ground cover will increase as more sunlight is able to reach the forest floor. The thinning will also promote increased diameter growth on residual trees. Harvesting may take place at any time of the year.

WATER QUALITY
The site is adjacent the Eau Claire river, but harvesting will not be on steep slopes. The site is flat to gently sloping sand. Minimum soil disruption will occur. All BMPs for water quality will be followed. No negative impact is expected. Local DNR water quality staff has been consulted.

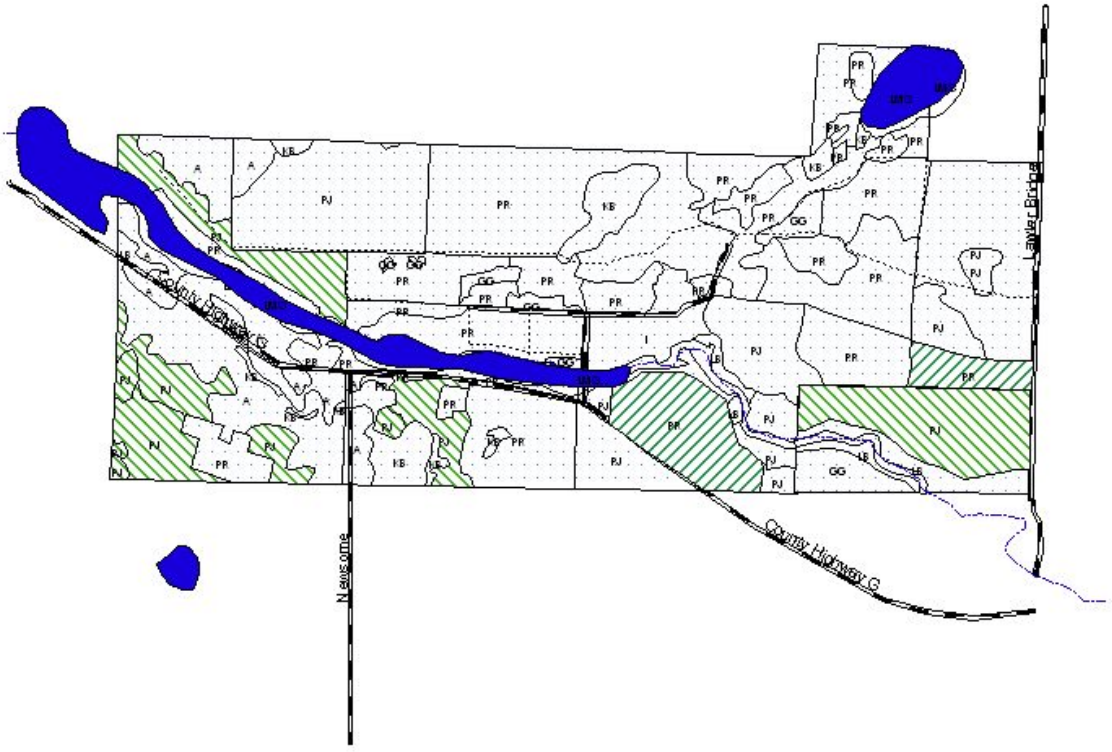
AESTHETICS
The aesthetic impact of the timber sale will be somewhat mitigated by the shape, size, and location of the cut areas. The cut areas are spread out over a very large area and many of the areas have a fairly open appearance to them already. The red pine will be treated with a thinning, which will have little impact on the aesthetics of the stand. Leaving the jack pine untreated at this time would likely result in standing dead trees, which has it's own aesthetic impacts.

WILDLIFE
This area is used by game and non-game, birds and animals. The regeneration harvest area will provide habitat for species which prefer early successional cover. The thinning will change use patterns very little. Over time, understory plants will become more established, thereby improving habitat for species that require ground cover. The local DNR wildlife manager has been consulted.

ENDANGERED RESOURCES
The staff of the Brule River State Forest is not aware of any potential negative impacts to any listed or endangered plant species, animal species, nor rare community that may occur as a result of this management activity. Bureau of Endangered Resources staff and Natural Heritage Inventory data has been consulted.

RECREATION
Use of this area is very limited due to it being adjacent to a prison facility. Very limited hunting occurs on the land and some fishing / boating is done on the Eau Claire River. Impacts will be minimal.

Tract 5-05
Gordon Red and Jack Pine
T43N R11E Sec 4,5,8,9



0.6 0 0.6 1.2 Miles

Woods Roads
Lakes
Tract 5-05 Red Pine
Tract 5-05 Jack Pine
Waterways
Public Roads

N
W E
S

Jack Pine regeneration harvest and Red Pine marked thinning. 175 acres.
Jack pine is very old and widely spaced.
Actual harvest acreage will appear to be much less than 175 acres.

Brule River State Forest--TRACT 6-05
Lepalla Road Aspen
Land Management Area = Lake Superior Clay Plain Native Community Management Area (area 1)
Aspen regeneration harvest 56 acres maximum

STAND DESCRIPTION

This activity occurs within a mature aspen stand that is approximately 65 years old. Aspen averages 10-12 inches in diameter with an understory that varies between alder and hazel, with scattered balsam fir. There are also a small number of mature jack pine within the area that were likely planted by the people that farmed this area in the 1940's and 1950's. Surrounding stands are mostly typical clay plain forest stands, with ash pockets, balsam fir, spruce, and aspen on the slopes leading to the Brule river and other drainages. There are several pockets of white pine, as well as some upland cedar in adjacent stands. Old fields are present in the area, with one adjacent area being planted to black spruce and tamarack approximately 20 years ago. Fields that were not planted to trees are gradually seeding in with white spruce and white pine.

GOALS

This stand falls within the Lake Superior Clay Plain native community management area as listed in the Brule River State Forest Master Plan. Overall forest management goals within this management unit are manage for natural communities dominated by "boreal" conifers. The goal of the management activity is to harvest mature aspen and jack pine while regenerating a mix of primarily aspen, fir, and spruce.

ECOLOGICAL CONSIDERATIONS AND SILVICULTURAL PRESCRIPTION

This 56 acre stand of aspen will undergo a partial harvest cut, with irregularly shaped harvest areas averaging around 5 acres in size. The areas most dominated by aspen will be the areas treated, with areas of other tree species left. All jack pine in the area will also be harvested concurrently with this sale before mortality occurs on this species. Jack pine regeneration is not expected following this treatment. Due to clay soils and poor town road conditions, this harvest will occur only on frozen soil conditions. Exact acreage to be treated is not calculated at this time, but is likely to be around ½ of the stand acreage. Several grassy openings will be utilized for landings on this sale. Expected regeneration within the cut areas is aspen, with an increased component of balsam fir and white spruce mixed with the aspen.

WATER QUALITY

The site is within a quarter mile of the Brule river, but no harvesting will take place on the slope to the river. There is also a drainage to the west within a ¼ mile of the stand, but again, the harvest will be above the final slope to the drainage. The amount of total acreage of young forest and open land within the sub watershed will be calculated and this harvest will not cause the acreage of young forest/open land to exceed 40% within the sub watershed. Research has shown that maintaining a mixture of age classes/open land will desynchronize snowmelt, which in the north country, is often the biggest "flood" a drainage sees each year. In addition to this, any opportunities to slow the flow of water from the landscape will be taken by blocking any old drainage ditches that may be found within the sale area. This can be as simple as placing large woody debris within the drainage to slow down water flow. The local DNR water management specialist has been consulted concerning this proposed sale.

AESTHETICS

The aesthetic impact of the timber sale will be somewhat mitigated by the shape, size, and location of the cut areas. The cut areas are spread out over a very large area and many of the areas will not be seen from any road. Lepalla road is a lightly traveled road with one home located at the end of Anna Niemi road. The homeowner has been consulted concerning this sale.

WILDLIFE

This area is used by game and non-game, birds and animals. The regeneration harvest area will provide habitat for species which prefer early successional cover. The thinning will change use patterns very little. Over time, increased conifer cover and less aspen may have some effect on local wildlife usage. The local DNR wildlife manager has been consulted.

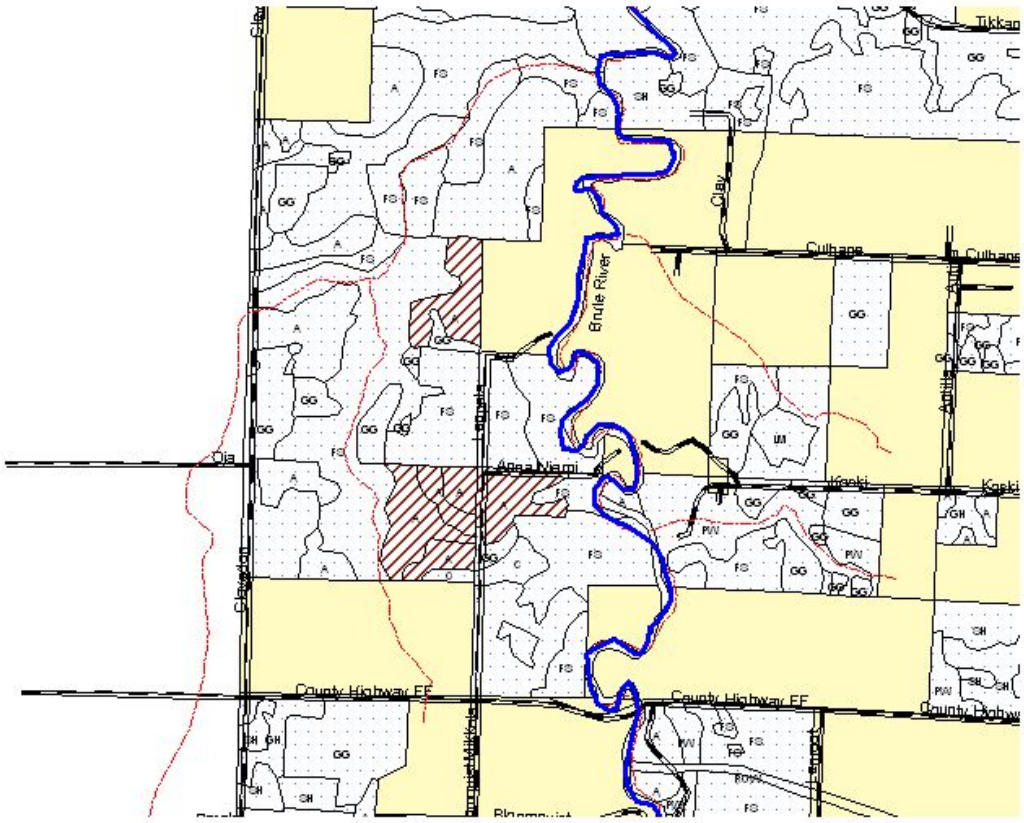
ENDANGERED RESOURCES

The staff of the Brule River State Forest is not aware of any potential negative impacts to any listed or endangered plant species, animal species, nor rare community that may occur as a result of this management activity. Bureau of Endangered Resources staff and Natural Heritage Inventory data has been consulted.

RECREATION

Use of this area is mostly for hunting. Impacts will be minimal.

Tract 6-05
Leppala Road Aspen
T48N R10E Sec 15



Regeneration Harvest on approximately 1/2 of the 56 acres shown on map.
Winter logging only. Cut all aspen and jack pine, leave all spruce, fir, and pine undamaged.